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WEALTH AND PROGRESS
OF
NEW SOUTH WALES.

THE

LTH AND PROGRESS

OF

EW SOUTH WALES

1892.

BY

T. A. COGHLAN, A.M., Inst. C.E.,
GOVERNMENT STATISTICIAN.

SIXTH ISSUE.

Sydney:
CHARLES POTTER, GOVERNMENT PRINTER, PHILLIP-STREET
E. A. PETHERICK & CO., 333, GEORGE-STREET
AND AT
MELBOURNE, ADELAIDE, AND LONDON.

1893.

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PREFACE.

THE matter contained in former issues of this work has been enlarged, so that the present volume deals with every subject of general interest in regard to which statistics are obtained, and the text has been further illustrated by a number of diagrams, and a map showing the density of population at the Censuses of 1861, 1871, 1881, and 1891.

It has been thought desirable to limit, except in special cases, the period covered by the tables to ten years. Should more detailed figures be required than are given in the text, these will be found in the "Statistical Register." The necessity of comparing the progress of New South Wales with that of the other Colonies, except on the most important points, is obviated by the publication of "The Seven Colonies of Australasia," which deals with the Colonies as a whole, as well as with their individual resources.

In preparing a work of this kind a difficulty is always experienced in making the information it contains interesting to persons outside the Colony who are not concerned about the details of local affairs, and at the same time to those living in the Colony who require such details. It is believed that in the present instance the difficulty has been fairly met. Every care has been taken to correct such errors as may have passed through previous editions, and to keep this issue free from them. If, however, any such should be discovered, it would be deemed a favour if their nature and position were pointed out.

Sydney, 1st January, 1893.

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PART I.

Historical Sketch.

Expedition of De Quiros.

Columbus of Australia was undoubtedly Don Pedro Fer- ndez de Quiros, a Spanish nobleman and navigator, who 1606 from Lima, in Peru, for the express purpose of g a southern continent, in the existence of which he had expressed his confident belief. Like Columbus, he ight the main land, but having succeeded in reaching a stretched for a great distance north and south, he mis- or the continent in search of which he had come, and e land Australia del Espiritu Santo. This was one of ds of the New Hebrides group, still known as Espiritu ickness and discontent led to a mutiny on De Quiros' e sailors insisting so vehemently on returning to Peru, dmiral was forced to abandon the further prosecution of eries. In company with De Quiros was Luiz Vaez de command of another ship, named the Almirante, who ing company with De Quiros, discovered that Espiritu s only an island. Torres, being afterwards forced to bear Philippines for the purpose of refitting, discovered and ough the strait which now bears his name, and even ape York, which he supposed to be only another of the ll islands abounding in the neighbourhood.

Earliest charts.

o the expedition from Lima, it is possible this continent d by navigators, the records of whose voyages have not smitted to us. The chart of Marco Polo would favour sition that the existence of a great south land was the Chinese; and, though the claims of De Gonneville iscovered Australia as early as 1504 are not tenable, aring the date of 1542 exist whereon is marked an territory to which the name of Great Java was given, might have been intended to represent the north-west ustralia. But however valid these claims may be the merit aniard is no wise lessened. It is certain that previous navigators endeavoured to conceal their discoveries, and no really authentic records remain to show how far those discoveries extended.

Dutch explorers.

About the time of De Quiros' voyage the Dutch sent out an expedition from Bantam in a small vessel called the Duyfhen, which discovered the Gulf of Carpentaria. Some of the crew landed, and are believed to have been the first Europeans who trod the shore of Australia. Being attacked by the natives they were forced to abandon any attempt to explore the country; and after naming the place Cape Keerweer, or Turn-again, they departed, apparently in total ignorance of the fact that they had landed on the northern shore of a great continent. Other Dutch adventurers discovered, during the following twenty years, various parts of the coast. Dirk Hartog, in 1616, landed on the island now bearing his name. Jan Carstens, in command of the yachts Pera and Arnhem, in 1623 sailed along the northern shores, for a long time called Arnhem's land. About the same time another Dutchman, Captain Edel, explored the greater part of the western coast. In 1622 a Dutch vessel, the Leeuwin, coasted along the south-west shore, from the cape which has been named after her, to King George's Sound; and in 1627 Peter Nuyts discovered the Great Australian Bight. Other Dutch explorers were Pelsart, who was shipwrecked on Houtman's Abrolhos in 1629, and Tasman, the discoverer of Tasmania and New Zealand.

Dampier's expedition.

Dampier, an English buccaneer and discoverer, also explored the west coast, from Shark Bay to Dampier's Archipelago, and the north-west coast, as far as Roebuck Bay, a distance of about nine hundred miles. This was in 1699, and he appears to have landed in several places. On his return he published an account of what he had seen. He described the country as sterile in the extreme, and almost devoid of animals, the only one of any importance somewhat resembling a racoon, a strange creature, which used only its hind legs, and, instead of walking, advanced by great bounds, or leaps, of twelve or fifteen feet at a time. This is the first notice of the kangaroo which has reached us. Dampier also describes the aboriginal inhabitants of the north-west coast in terms the reverse of favourable, which, however, apply equally to the natives of New South Wales as first seen by Captain Cook. The mention of this last distinguished man brings the narrative to the period when the real history of New South Wales, and therewith that of Australia, begins.

Voyage of Captain Cook.

The great voyage of James Cook, in 1769-70, was primarily undertaken for the purpose of observing the transit of Venus, but his instructions also mention among its objects the making of further geographical discoveries. The ship in which Cook sailed was a small vessel of 320 tons, carrying twenty-two guns. Originally built for service as a collier, she was selected for the use of the expedition on account of her unusually strong construction. This craft had been chosen by Cook himself, and was renamed the Endeavour, in allusion to the great work which her commander was setting out to achieve. Mr. Green was to conduct the astronomical observations, and Sir Joseph Banks and Dr. Solander were appointed botanists to the expedition. After successfully observing the Transit from the island of Tahiti, or Otaheite, as Cook wrote it, the Endeavour's head was turned south, and then north-west, beating about the Pacific in search of the eastern coast of the great continent, whose western shores had been so long known to the Dutch. After circumnavigating, and minutely surveying New Zealand, Cook stood due west, and in three weeks sighted the cliffs of New Holland, as Australia was then called.

The Endeavour.

The first important point observed was Cape Howe, which was so named by Cook. After passing and naming Mount Dromedary, the Pigeon House, Point Upright, and Cape St. George, on the 28th April, 1770, Botany Bay was discovered, which, as it apppeared to offer a suitable anchorage, the Endeavour entered, and dropped anchor. The ship brought-to opposite a group of natives, who were cooking over a fire. Cook and his crew, unacquainted with the character of the Australian aborigines, were not a little astonished that these natives took no notice of them or their proceedings.

Cook anchors in Botany Bay.

Even the splash of the anchor in the water and the noise of the cable running out through the hawse-hole in no way disturbed them at their occupation, or caused them to evince the slightest curiosity. But as the captain of the Endeavour ordered out the pinnace and prepared to land, the natives threw off their nonchalance; for on the boat approaching the shore two men, each armed with a bundle of spears, presented themselves on a projecting rock and made threatening signs to the strangers. It is interesting to note that the ingenious "wommera," or throwing stick, which is peculiar to Australia, was first observed on this occasion. As these men were evidently determined to oppose any attempt at landing, a musket was discharged between them, in the hope that they would be frightened by the noise, but it produced no effect beyond causing one of them to drop his bundle of spears, of which, however, he immediately re-possessed himself, and the two natives still preserved the same menacing attitude. One of them at last cast a stone towards the boat, which earned him a charge of small shot in the leg. Nothing daunted, the two men ran back into the bush, and presently returned furnished with shields made of bark, with which to protect themselves from the firearms of the crew. The intrepidity of these men is certainly worthy of passing notice. Unlike the American Indians, who supposed Columbus and his crew to be supernatural beings, and their ships in some way endowed with life, and who were thrown into convulsions of terror by the first discharge of firearms which they witnessed, these Australians were neither excited to wonder by the ship nor overawed by the superior number and unknown weapons of the strangers. Cook examined the bay in the pinnace, and landed several times; but by no endeavour could he induce the natives to hold any friendly communication with him. The well-known circumstance of the great variety of new plants here obtained, from which Botany Bay derives its name, should not be passed over. Before quitting the bay the ceremony was performed of hoisting the Union Jack, first on the south shore and then near the north head, thus taking formal possession of the territory for the British Crown.

Encounter with the Aborigines.

Darwin's prophetic lines.

one of the causes which determined the Government of the day to found the colony of New South Wales; for it will become evident, as the narrative proceeds, that all concerned felt they were engaged in founding a new home in the Southern Hemisphere for the British people, and that visions of even greater progress than has yet been attained filled the minds, not only of Viscount Sydney and Governor Phillip, but also of many reflecting persons in the Colony itself. The truth of this view is amply demonstrated by the testimony of several contemporary writers; but it is nowhere more strongly emphasized than in the lines entitled "The Visit of Hope to Sydney Cove," the author of which was Darwin, whose "Botanic Garden" is well known. The lines have been often quoted; but they contain so distinct a prophecy of the greatness to which the Colony has attained that they may be appropriately introduced:

Where Sydney Cove her lucid bosom swells,
Courts her young navies and the storm repels;
High on a rock amid the troubled air
Hope stood sublime and waved her golden hair,
Calmed with her rosy smile the tossing deep,
And with sweet accents charmed the winds to sleep;
To each wild plain she stretched her snowy hand,
High waving wood and sea-encircled strand.
'Hear me,' she cried, 'ye rising realms! Record
'Time's opening scene and Truth's unerring word.
'*There* shall broad streets their stately walls extend,
'The circus widen and the crescent bend;
'*There*, ray'd from cities o'er the cultured land,
'Shall bright canals, and solid roads expand,
'*There* the proud arch, Colossus-like, bestride
'Yon glittering stream, and bound the chafing tide;
'Embellished villas crown the landscape scene,
'Farms wave with gold and orchards blush between.
'*There* shall tall spires, and dome-capped towers ascend,
'And piers and quays their massy structure blend;
'While with each breeze approaching vessels glide,
'And northern treasures dance on every tide.'
Then ceased the nymph—tumultuous echoes roar—
And joy's loud voice was heard from shore to shore—
Her graceful steps descending pressed the plain,
And Peace and Art and Labour joined her train.

words as these could not have been inspired by the prospect
“big gaol growing still bigger,” which some foreign writers
was all the Colony was ever expected to become. On the
ry they mark the prescience of those who, one hundred years
w clearly what a great enterprise was being then initiated.

Viscount Sydney determines to found the Colony.

as in the early part of 1787 that Viscount Sydney, Secretary
te for the Colonies, determined to plant a colony in New
Wales, and by May of that year the “First Fleet” had been
bled. It consisted of the 20-gun frigate Sirius; the armed
Supply; three store ships—the Golden Grove, Fishburn,
orrowdale; and six transports—the Alexander, Scarborough,
Penrhyn, Prince of Wales, Friendship, and Charlotte. The
t of these vessels measured only 450 tons, and the smallest
o more than 270 tons. On board of the six transports
packed no fewer than 564 men and 192 women, all
ers who had been sentenced to expatriation. There were
arried 168 marines and 10 officers, commissioned and non-
issioned. These, with 5 medical men, a few mechanics, and
men, wives of marines, together with 13 children, the off-
of the convicts, made up the total number of persons
tched to found the Colony. Captain Phillip, R.N., was
in command of the expedition, and also bore a commission
vernor and Captain-General of New South Wales. Second
mmand was Captain John Hunter, of the Sirius, and Mr.
Collins accompanied the expedition as Judge Advocate.

Sailing and arrival of the “First Fleet.”

e fleet sailed at the end of May, 1787, and after calling at
aneiro, arrived in Botany Bay in the beginning of January,
A cursory examination convinced Captain Phillip that a
unsuitable site for a new settlement could hardly have been
n than the shores of this bay. Despite the profusion of new
which had so delighted Banks and Solander, the neighbour-
of Botany Bay is by no means fertile. The scarcity of good
was a further disadvantage, while the bay itself was so
w as to forbid the ships approaching the shore, which would

have necessitated the erection of piers and jetties of great length. It was besides exposed to the full swell of the Pacific, being destitute of bays, creeks, or coves of any kind. The Governor accordingly determined to explore the coast in search of a more suitable site for the settlement. After proceeding with three of the boats about nine miles, he found himself abreast of the entrance of Port Jackson, which Cook had supposed to be a mere shallow indentation of the land, fit for nothing but a landing-place for boats. Undeterred by this opinion, Phillip rounded the South Head and soon saw opening before him the whole expanse of one of the finest harbours in the world. For miles to the west stretched the peaceful waters of Port Jackson, which must have delighted the minds of the explorers, disheartened as they had been by the appearance and surroundings of Botany Bay. In place of the stunted scrub which formed the greater part of the vegetation of that locality, Port Jackson was found to be surrounded by a thick forest of noble trees, which extended to the water's edge, and promised an abundant supply of timber for building. In place of the open roadstead at Botany a countless succession of bays and inlets opened on the astonished gaze of the hardy navigators as they proceeded up the harbour. Deep water was found to extend to the very base of the rocks, thus obviating any necessity for expensive wharves, the construction of which must have occupied the little community for many months, to the neglect of more immediately pressing wants.

Discovery of Port Jackson.

Sydney Cove selected for settlement.

The Governor's choice of the site of the present metropolis of Australasia was determined by the fact that an apparently perennial stream of the purest water was found discharging itself into a beautiful sandy cove, about six miles from the entrance, which was named Sydney Cove, in honour of the statesman under whose auspices the enterprise had been undertaken. Before finally deciding on this site, Captain Phillip spent three days in exploring the various bays, but was confirmed in his original choice by the fact that no such stream of water had been found elsewhere, though in other respects numerous positions equally eligible presented themselves.

La Pérouse's Expedition.

Returning immediately to Botany, preparations were made for bringing the colony round to Sydney Cove, when as the fleet were standing out of the bay an interesting incident occurred. Two strange vessels evidently making for the entrance were discerned in the offing. Captain Phillip went out in the Supply to meet the strangers, who proved to be a French exploring party under the command of Jean François Galaup, Comte de la Pérouse, their vessels being the frigates Astrolabe and Boussole. After an interchange of courtesies, the French were left to refresh and refit in Botany Bay. They stayed there till March, 1788, and buried one of their company on shore—Father le Receveur, of the Order of St. Francis, the naturalist of the expedition, who died of wounds received in an encounter with the natives of the South Seas. His tomb is still extant at La Pérouse, near the north head of Botany Bay, where also a monument was placed, in the year 1825, to the memory of the commander of the expedition, who was shipwrecked and whose crew were murdered on the Santa Cruz Islands. The monument was erected by Messrs. De Bougainville and Ducampier, commanding the French war vessels, Thétis and Espérance, then lying in Port Jackson.

Foundation of the Colony.

On Captain Phillip's arrival in Sydney Harbour, on the memorable 26th January, 1788, the ships anchored in the Cove, and preparations were at once made for landing the colonists. The clearing of the ground in the vicinity, and along the banks of the little stream, was commenced, and when a sufficient space had thus been obtained a flagstaff was erected, and the Union Jack run up. After the firing of three volleys by the marines, the Governor read his commission, and addressed words of counsel, warning, and encouragement to the prisoners, the ceremony closing with general festivity. Arduous labour succeeded this scene, for it was well understood that unless the settlers could raise supplies for themselves, the existence of the Colony would be precarious, as the store of provisions in their possession was calculated to last only a very short time.

Farming first attempted.

Accordingly ground was cleared at the head of Farm Cove, adjoining the settlement, and an attempt made to raise wheat, but time has shown that the soil in the immediate neighbourhood of Sydney is not suited to the cultivation of this cereal, and even if a good crop had been obtained the colonists must have starved while it was maturing. No food worth mentioning was procured from the land, and the little community was on the brink of starvation, when a ship arrived with another batch of colonists, but without stores. This brought matters to a climax, whereupon Governor Phillip sent the Sirius to the Cape Colony, and the Supply to Batavia, to procure provisions, which, however, could only be obtained in insufficient quantity, so that in a few weeks after the return of these vessels the state of affairs became as bad as before, and starvation again stared the Colony in the face. Under these circumstances, everyone, including the Governor himself, was placed on short allowance, and even the sheep and cattle which had been reserved for breeding purposes were killed for food. In this aspect of affairs the Governor bethought himself of Norfolk Island, whither, shortly after his arrival, he had sent Lieutenant Philip Gidley King, of the Sirius, to establish a branch colony. A detachment of 200 convicts, with a guard of 70 marines, was, therefore, despatched to the island. On arrival they found that King and his men had cleared a considerable portion of land, and had succeeded in raising an abundant crop. But the Sirius, in which the new detachment sailed, was wrecked on a reef off the island, so that no supplies were procured thence at that time.

The "Second Fleet."

When the prospects of the settlement at Sydney Cove had reached their gloomiest, the "Second Fleet," consisting of three store-ships, arrived, and snatched the Colony from the very brink of destruction by famine. This tided over the difficulty, and so great a privation of food was never again experienced. Fresh difficulties, however, beset the settlers by the arrival of some ship-loads of immigrants, most of whom were in a sick and dying condition. Of 1,700 men and women who had been embarked, Escape of prisoners.

200 died on the voyage, and several hundred more were found to be *in extremis* on arrival. In the midst of these horrors the Governor's responsibilities were further increased by the attempts of some of the prisoners to escape from the Colony. Some took to the bush, others stole boats and put to sea, intending to reach the Dutch settlements in the Indian Ocean. Daring as this latter attempt may appear, it was in one instance successful; two men and a woman, in an open boat, succeeded in reaching Timor, where they were imprisoned and sent back to Sydney on the first opportunity. Numerous efforts were made to escape from the settlement by land, the ignorance of the convicts being such that many imagined they could walk overland to China, and not a few perished in the bush while making the attempt.

Departure of Phillip.

Governor Phillip's health gave way under the care and anxieties of his office, and in 1792 he returned to England, where in reward for his exertions in founding the Colony he received a pension, and died at an advanced age. Major Grose and Captain Paterson, officers in charge of the military, administered the Government till the arrival of his successor. In 1795, Captain Hunter, who after the loss of the Sirius had gone to England, arrived as the second Governor. With the arrival of Governor Hunter affairs took a new turn. He brought out a number of free settlers, mostly farming men; and some fine alluvial land having been discovered on the banks of the Hawkesbury, farming was successfully started, and in a short time more than 6,000 acres were under crops of wheat and maize. The attempts to introduce cattle were for a time unsuccessful, but in 1796 a herd of 60 head was discovered at the "Cowpastures," near Camden. These were the descendants of some cattle which had strayed from the settlement several years before. Though their quality was found to have deteriorated, they proved a very welcome addition to the live stock of the settlement. In 1800, when Captain Hunter left the Colony, the population was over 6,000; attempts had been made to penetrate into the interior, but without success; the Hunter River and its coal-mines

Farming enterprise initiated.

had been discovered, and the mines were being worked by a detachment of prisoners; the city of Newcastle had been founded, and the New South Wales Corps, a military body enlisted for service in the colony (the first detachments of which had arrived in 1790), formed an efficient garrison, and guard over the more refractory prisoners. During Governor Hunter's term of office Bass and Flinders minutely examined the coast to the south of Sydney, in a small boat only 9 feet over all; and the former discovered the strait which bears his name, thus proving Tasmania to be an island, and not the southern extremity of the continent, as previously supposed.

Newcastle founded.

Governor King.

The next Governor was Philip Gidley King, previously mentioned as the Lieutenant of the Sirius, who was despatched by Phillip to found a settlement on Norfolk Island. Though all fears of famine had now disappeared, Governor King soon found himself involved in difficulties of a scarcely less distressing nature. To explain these it will be necessary to describe the constitution of the New South Wales Corps. This body had been specially raised for service in the Colony, the officers of the King's regiments not unnaturally objecting to be sent to such a far distant settlement, where they knew that they would find no intellectual occupation, and where their sole work would consist in acting as a prison guard, or, at most, in making a few raids, in alleged reprisals for the misdeeds of the illused, and often sorely provoked, aborigines. As a military guard of some sort was necessary, this corps was raised, and a few enterprising spirits—many of whom had never served before—were induced to accept commissions, with the view of obtaining grants of land and making their fortunes in the Colony. Unfortunately, the readiest means to this end was found in the import trade, and as rum was in great request, the officers of the New South Wales Corps became importers of that spirit in large quantities, and even set up private stills, in defiance of a Government order to the contrary. As an instance of the enormous profits made in this trade, it may be mentioned

Traffic in spirits.

that the retail price of rum, on the arrival of Governor King, was £2 per gallon, 7s. 6d. to 10s. being the utmost cost to the importer.

Suppression of the "Rum currency."

To put a stop to this state of things—in which the officials and rulers of the Colony were really doing their best to debase those committed to their charge—a clause was inserted in the instructions of the new Governor, as follows:—"You are to order and direct that no spirits be landed from any vessel coming to Port Jackson without your consent." In consequence of this order, King proceeded to act promptly, and when he left the Colony in 1806, he had sent away no less than 69,484 gallons of spirits, and 31,293 gallons of wine. The quantity which he allowed to be landed was sold, by his order, at various prices, the maximum not exceeding 10s. per gallon. It may be easily imagined what a storm such vigorous proceedings caused among the importers, and how embittered the officers of the New South Wales Corps became against the Government.

The Castlehill Revolt.

During King's time a serious mutiny occurred among the prisoners. The more tractable of the convicts were "assigned" as servants to the settlers, and engaged in working the farms and squattages, but the more desperate characters, made desperate in many instances by the treatment they received, were worked on the roads, in chain-gangs. A party of over 300 of these chain-gang men was employed at Castlehill, on the road between Parramatta and Windsor. These men, taking advantage of the small number of their guard, abandoned their work, managed to remove their irons, seized some firearms, and marched towards the Hawkesbury, expecting to be reinforced by the men employed in that neighbourhood. Major Johnston, second in command of the New South Wales Corps, pursued them, however, with only twenty men, and on coming up with them, charged with such precipitation that the mutineers were fain to lay down their arms and beg for mercy. Three or four of the ringleaders were afterwards hanged, and the rest were permitted to return to their duty on undertaking to be of good conduct for the future.

Initiation of wool-growing.

An event of the utmost importance to the Colony also took place under the administration of Governor King. This was the initiation of wool-growing. John Macarthur, who had held a commission as captain in the New South Wales Corps, procured, by great trouble and perseverance, some Spanish merinos, and having obtained a grant of 10,000 acres of land across the Cowpasture River, which estate he named "Camden," commenced the growth of wool on a large scale. In a short time his enterprise showed every sign of a successful issue, to the great benefit of the Colony generally, and his own personal advantage. In spite of these evident signs of material progress Governor King was so worn out with the conflicts caused by his endeavours to suppress the rum traffic, and in such constant collision with the officers of the New South Wales Corps on that account, that he seized the first opportunity of leaving the Colony, and was succeeded in the Government in 1806, by William Bligh, a post-captain in the navy.

Governor Bligh.

Governor Bligh was a distinguished naval officer. His wonderful voyage after the Mutiny of the Bounty had caused the Imperial Government to entertain a high opinion of his conduct, as well as his courage and determination. His services were numerous, and he had been publicly thanked by Lord Nelson, after the bombardment of Copenhagen, for the gallantry and skill which he displayed on that occasion. Hence he was selected as a fit man to crush the clique of officers engaged in the rum traffic, and to purify official life in the Colony. King had been only partially successful in this direction, and the British Government gave the strictest injunctions to Captain Bligh to stop the trade in spirits. Accordingly in February, 1807, he issued the following general order :—"His Excellency the Governor laments to find by his late visit through the Colony that the most calamitous evils have been produced by persons bartering, or paying, spirits for grain of all kinds, and the necessaries of life in general, and to labourers for their hire; such proceedings depressing the industrious and depriving the settlers of their comforts. In order, therefore, to remedy these grievous complaints, and to relieve the inhabitants, who have suffered by the traffic, he feels it his duty to put a total stop to this barter in future, and to prohibit the exchange of spirits or other liquors as payment for grain, animal food, wearing apparel, or any other commodity whatsoever, to all descriptions of persons in the Colony and its dependencies."

This order is in itself sufficient to indicate to what fearful lengths the "rum currency" had been carried. Naturally it would have been expected that all respectable people, the military and ex-military especially, would have joined the Governor heart and soul in his efforts to put a stop to the traffic, and induce a more healthy state of things. Such, however, was not the case; and the struggle in respect to the illicit trade continued throughout the whole period of Bligh's governorship.

Embittered relations between the Governor and settlers.

Other matters embittered the relations between the Governor and the colonists, and in these Bligh was not so obviously in the right as in his attempt to put down the contraband traffic in spirits. The contest reached its climax on the arrest of John Macarthur, whose efforts to promote the growth of wool have been alluded to. That gentleman had become specially obnoxious to the Governor; and as he was also the chief trader in the community, he was selected as a scapegoat for the sins of the rest. Matters were brought to a crisis in the following manner, though the immediate circumstances of his prosecution had no direct connection with the barter of spirits. Mr. Macarthur had been part owner of a vessel that traded to Tahiti for salt pork and other articles, for the supply of the Colony. At a time when this vessel was lying in Port Jackson, he received a summons from Mr. Atkins, the Judge Advocate—that is, Chief Justice—to appear before him to answer to a complaint on the part of the crew of his vessel of withholding from them their wages, in consequence of which they alleged that they had been compelled to break through the port regulations, by coming ashore without special order. Macarthur returned an answer in writing, explanatory of his conduct in the matter, but did not obey the summons by appearing in person. This was construed to be an act of contumacy, which some attributed to a feeling of personal resentment towards the Governor, engendered by the action of the latter against the "rum currency."

Arrest of Macarthur.

A warrant was accordingly issued for Macarthur's apprehension, and on the 25th January, 1808, he was brought before the Judge Advocate and a military jury of six, consisting of officers of the New South Wales Corps—such being at the time the composition of the Supreme Court of the Colony. Mr. Macarthur objected to the Judge Advocate sitting on his trial, on the ground that he bore him personal ill-feeling, for which assertion it would appear that there was some foundation, especially as Atkins's adviser throughout the whole proceedings was one George Crossley, a transported attorney, who is believed to have been an enemy of Macarthur. Be this as it may, the Judge Advocate refused to abdicate his position, and the Governor declined to supersede him, for which, indeed, he had no authority, Atkins having been appointed by the British Government.

Conduct of the military officers.

At this juncture the Governor summoned the six officers to his presence, to explain their conduct in supporting Macarthur's protest and refusing to sit with the Judge Advocate, but they declined to obey. The Governor also sent several times during the next day to Major Johnston, the Commandant, at his residence at Annandale, asking him to confer with him as to the conduct of his subordinates. That officer, however, declined to come to town, on the plea of ill-health. This was an evident subterfuge, for between 6 and 7 p.m. on the same day (the Anniversary of the foundation of the Colony) he suddenly made his appearance in the Barrack Square, where, if we may believe his statement, he found everything in a state of ferment and confusion, and himself beset with the clamours of a number of the leading inhabitants, civil as well as military, calling upon him to put the Governor under arrest. He accordingly marched at the head of his regiment,

Deposition of Bligh.

with drums beating and colours flying, to Government House, and Governor Bligh was put in close confinement in his own residence. Johnston thereupon assumed the Government, his first act being to suspend the Judge Advocate, the Commissary, the Provost-marshal, the Chaplain, and other principal officials, and to appoint others to act in their place.

Major Johnston continued to administer the Government till his Lieutenant-Colonel (Foveaux) superseded him, as the senior officer in the Colony, and eventually Colonel Paterson came from Tasmania and assumed the direction of affairs. Both these officers approved Johnston's proceedings, but the latter set Bligh at liberty after a detention of twelve months, on condition of his proceeding straight to England, in a vessel which was then ready to sail. Bligh promised to do so, but called at Tasmania on his way, where the military authorities attempted to detain him, but he escaped their hands.

Johnston tried by Court martial.

News of the affair had meanwhile reached England, and the Government was very much concerned at the proceedings of the military, and had despatched Lieutenant-General Macquarie to the Colony as Governor. His instructions were to reinstate Governor Bligh for twenty-four hours, to assume the government himself, and to send Johnston home under close arrest. Bligh could not be reinstated, as he had left Sydney; so Macquarie's first act was to arrest Major Johnston, who was subsequently tried by court-martial in England and sentenced to be cashiered, the leniency of the sentence being such as to call forth special remark from the Prince Regent, in a minute appended to the proceedings, distinctly stating that it was not to be drawn into a precedent. Johnston afterwards returned to the Colony, and died at his estate at Annandale.

Arrival of Macquarie.

With the arrival of Governor Macquarie, the colony entered on a stage of decided progress. The final abolition of the traffic in rum was followed by a marked improvement in the morals of the population. Schools were established, and the children, who had hitherto grown up in total ignorance, were taught to read and write, and instructed in useful handicrafts. An impetus was given to exploration, and the dwellings of the settlers in the bush were much improved by the efforts of the Governor during the annual tours which he made through the Colony. Churches and public buildings were erected, asylums founded, and a better tone was given to society generally by the exertions of this philanthropic governor, ably seconded by the endeavours of his high-minded wife, who laboured to improve the condition of her sex and the children in the Colony. Among the many beneficial works undertaken by Macquarie, by far the most important was the road over the Mountains, via Lapstone Hill and Mount Victoria, to Bathurst. After many attempts to penetrate the Coast Range, it had been at last successfully crossed in 1813 by Blaxland, Wentworth, and Lawson, names memorable in the annals of the Colony. An account of the expedition will be found in another place.

Schools and Churches opened.

Macquarie's policy.

Another distinguishing feature in Governor Macquarie's policy, which was almost as beneficial as his efforts to instruct the population in religion and morality, and to open up the country, was the favour with which he treated the "emancipists," that is, those convicts who had become free by serving out their sentences. When it is remembered that the majority of those transported had been guilty of petty offences only, or of acts which in these days would scarcely be deemed offences at all, the Governor's determination to give every encouragement in the way of official recognition to emancipists must be strongly commended. To transport a person for a petty offence, to ostracise him for the rest of his life, and to extend the social ignominy to his children was in the highest degree unjust; and Governor Macquarie, as a humane man, set his face against the custom. In religious matters he showed a largeness of mind, in advance of public opinion, by removing, as far as lay in his power, the religious disabilities under which a large section of the colonists laboured. In 1821, after a longer term of office than has been allotted to any Governor either before or since, Governor Brisbane.

"L. Macquarie, Esq.," as he modestly styles himself in the inscriptions on the public buildings he erected—discarding the prestige attaching to his military rank—left the Colony, to the regret of the entire population, and was succeeded by Sir Thomas Brisbane.

The new Governor trod in the steps of his predecessor. He carried on the work of exploration, and in 1823 despatched Mr. Oxley, Surveyor-General, to survey Moreton Bay, Port Curtis, and other parts of the north-eastern coast-line. Oxley discovered a river debouching into Moreton Bay, which he named after the Governor, and a town was founded on its banks, also named Brisbane, which has become the capital of the Colony of Queensland. The Murray and Murrumbidgee Rivers were discovered soon afterwards by Hovell and Hume, who had formed an exploring party under the auspices of the Governor. The immigration of free settlers was much encouraged by Sir Thomas Brisbane, the result being the arrival of numbers of young men, many possessing capital, who became squatters, and soon wrought an important change in the Colony, by causing the costly Government farms to be broken up. As a consequence the wants of the community were more cheaply and better supplied by private enterprise. Censorship of the press, which had been strictly enforced up to this time, was abolished by Governor Brisbane, by proclamation dated 15th October, 1824. Trial by jury was introduced about the same period, by which the privilege of being tried by his peers was extended to every man; the assessors to the judge before that time having been chosen exclusively from officers in the army. Sir Francis Forbes, the first Chief Justice, was mainly instrumental in introducing this great and salutary change in the administration of the law. The first normally constituted jury sat at the November Quarter Sessions of 1824. An Act had also been passed by the Imperial Parliament, in 1823, which conferred another most important privilege on the Colony. It was provided that the Governor should nominate a Legislative Council of seven members, by whose advice he was to be guided. Previously to the appointment of

Free Immigration encouraged.

Trial by Jury introduced.

this Council the Governor had been virtually absolute in power, the only check upon him being the public opinion of the colonists and the authority of the British Government, as represented by the Secretary of State for the Colonies. This Council of Seven was really the nucleus around which have gathered our present Constitution, and the liberties we now possess. It was the first step, in which, says the proverb, all the difficulty consists; and yet it was only after much agitation that even this modicum of justice was conceded.

Governor Darling.

The next Governor was Sir Ralph Darling, who, finding the Colony in the state of progress above described, by a series of blunders nearly succeeded in marring the beneficial result of the efforts of his predecessors. Arriving in Sydney in 1825, he soon became involved in very serious disputes with the colonists and the press. In order to meet the criticisims of the latter, a number of Acts were passed by the Council, which had the effect of stifling obnoxious comments for the time. One good result which sprang indirectly from these arbitrary acts was the enlargement, in 1828, of the Legislative Council from seven to fifteen members. The "Bushranging Act" was passed by this Council to put down a prevalent nuisance—the gangs of escaped prisoners who infested the principal roads and robbed allcomers without distinction.

Exploration.

The work of exploration made some progress in Governor Darling's time, the famous journeys of Captain Charles Sturt having been undertaken under his sanction. Other explorers were Allan Cunningham, Hume, and George Macleay, son of Alexander Macleay, the Colonial Secretary of that day.

French settlements suspected.

It was strongly suspected at this time that the French had an idea of forming settlements in Australia. French ships constantly appeared off the coast, ostensibly fitted out for the purpose of making geographical discoveries, but really, it was believed, to found a colony in any Australian territory which they might find unoccupied. To frustrate this suspected design, Darling despatched two expeditions, in 1826, to King George's Sound and to Western Port, in which neighbourhood it was surmised the French were hovering. To show that there was some ground for these fears, chimerical as they may now appear, it will be sufficient to quote the Governor's instructions to the officers in charge of the expeditions. He says:—"Should you find the French already in occupation, you will, notwithstanding, land the troops, and signify to the Frenchmen that their continuance with any view of establishing themselves, or colonization, will be considered an unjustifiable intrusion on his Britannic Majesty's possessions." No Frenchmen, however, were found at either of the places named, and settlements were therefore promptly formed at Western Port, King George's Sound, and Swan River, in Western Australia. When Governor Darling left the Colony in 1831, much progress had been achieved, in spite of the newspaper war, and his personal unpopularity, the population having reached over 51,000 for the whole of New South Wales, while the value of the total exports was £500,000.

New settlements formed.

Governor Bourke.

The unpopularity of Governor Darling gave a factitious advantage to his successor, Sir Richard Bourke, even before his sterling qualities had become known. Sir Richard Bourke may be said to have been the real founder of our present free institutions, as, under his rule, the foundations of the Constitution we now enjoy were well and firmly laid, on the solid basis of full and equal rights to all, whatever their sect or belief, and whether emancipist or originally free. Immigrants began to arrive in large numbers, under a policy of assisted immigration, which was then first commenced. The first vote in aid of immigration was made by the Legislative Council at Bourke's suggestion, and the British Government doubled the amount given by the Colony. Under that system the first batches of immigrants to arrive were fifty young women from an orphan school in Cork, and fifty-nine mechanics from Scotland, whom the Rev. Dr. Lang introduced to aid him in building the Australian College.

Assisted Immigration initiated.

Establishment of Religious Equality.

Governor Gipps.

But the great achievement of Sir Richard Bourke's reign was the establishment of religious equality, and the breaking up of the monopoly of Government aid enjoyed by one communion. For his services in the cause of liberty, in this and other instances, a movement was set on foot after his departure—which took place in 1837, twelve months after the passing of the Church Act—to erect a statue of him in Sydney. Mr. Westmacott was commissioned to design a figure of Sir Richard in bronze, which, together with a granite pedestal, arrived in Sydney in 1842. It was erected where it now stands, at the Macquarie-street entrance to the Domain, opposite to the Public Library, and was unveiled on the 11th April, 1842. A general holiday was proclaimed on the occasion, and the assemblage was the most numerous which had up to that time gathered, for any purpose, in the metropolis. The succeeding Governor, Sir George Gipps, delivered a speech, laudatory of his predecessor, in whose steps he said he was resolved to tread. This was the first statue ever set up in Australia. It was no more than a fitting tribute to the virtues of the Governor, and serves even now as a reminder of the new order of things which he introduced.

Free grants of land abolished.

Free grants of land were abolished at this time. All land in the settled districts was put up to auction at an upset price of 5s. per acre, except in the Port Phillip district, where £1 per acre was fixed as the lowest price, on account of the fitness of the land for agriculture. Beyond the settled districts the runs of the squatters, whose boundaries had hitherto been undefined, were marked out, and a small rent charged, in return for a partial fixity of tenure, the squatters having previously been liable to be turned out at any time.

Sir Thomas Mitchell's explorations.

The famous expeditions of Sir Thomas Mitchell, who had succeeded Oxley as Surveyor-General, were undertaken during Bourke's tenure of office. The first was to the north, as far as Liverpool Plains; in the second, the country between the Bogan and the Macquarie was surveyed; and in the third, the course of the Darling was traced, from its source to its junction with the

Murray. In the fourth, Mitchell discovered the rich lands of Victoria, which so enraptured him that he named the country Australia Felix.

Transportation abolished.

The reign of Sir George Gipps was marked by the abolition of transportation. The system of assigning convicts as servants to the settlers had ceased in 1838, and transportation itself was abolished by an Order in Council in 1840, though an attempt was made to revive it nine years later, an account of which will be given in due course. For many years previous to its abolition, the system of transportation was viewed with great disfavour by the colonists, and a powerful league was formed as early as 1830, to bring about its cessation. During the fifty-three years when New South Wales was open to receive British prisoners, the number of convicts sent to Sydney was 83,290, of whom 70,928 were males and 12,362 females. At the census of March, 1841, there were in the colony 18,248 persons, 14,718 males and 3,530 females, originally bond, but free by servitude or emancipation—and 24,489 persons, 21,367 males and 3,122 females, whose period of servitude had not expired. It would therefore appear that out of the total number of convicts sent to the Colony, 42,737 remained at the abolition of the system of transportation, while 40,553 had either been removed by death or had left the settlement.

Legislative Council established.

The great event of Governor Gipps's time was undoubtedly the introduction of a new Constitution, by the establishment of a Legislative Council composed of thirty-six members, twelve nominated by the Crown, and the remainder elected by those who were placed on the electoral roll, a small property qualification being required. The new Council met on 1st August, 1843.

Commercial crisis.

A great commercial crisis followed soon after the introduction of the new Constitution, so that the subject of paramount importance which engaged the attention of the Legislature was the financial condition of the Colony. The cessation of transportation had, of course, caused the withdrawal of large sums of British money, which used to be spent on public works and in maintaining

Boiling-down introduced.

the prison establishments, and the military necessary to guard them; and much distress was also caused by an unwise interference on the part of the Imperial Government with the land laws. The price of sheep fell in the most alarming manner, 1s. per head being a common price. Mr. O'Brien, who occupied a run in the Yass District, at length hit upon the happy idea of boiling down sheep for tallow, for which at the time there was a good market in Europe; and the price of sheep was thus raised to 3s. or 4s. a head, five shillings' or six shillings' worth of tallow being obtainable by the process of boiling-down. The meat-canning industry was started at the same time by Mr. Sizar Elliott, of Charlotte-place, Sydney, but was not financially a success, although the preserved meats, it is said, were of excellent quality.

The Bank of Australia Lottery.

The Legislative Council, imagining that the very existence of the Colony was threatened by the prevailing state of things, sought to "avert ruin"—to use their own expression—by "pledging the public credit," but the Governor refused the Royal assent to the Bill passed for that purpose. It was then proposed to issue Treasury Bills, but the Council would not entertain the idea. The failure of the Bank of Australia, the liability of whose shareholders was unlimited, brought affairs to a crisis, and it was proposed to relieve the shareholders of their liability by a Bill empowering the bank to dispose of its assets by a public lottery. No attempt was made to defend lotteries in general, but it was contended that if the goods of proprietors of the bank were seized under executions, the bailiff would be seen in possession of one house in ten in Sydney, and that the result would be a panic, which would annihilate the value of property. Under pressure of such an argument as this the "Lottery Bill" passed, but was disallowed by the British authorities. The necessity of the case was so urgent, however, that the lottery took place, and was successfully completed before the law officers of the Crown could interfere to prevent it. Desperate diseases require desperate remedies, and the lottery was, no doubt, in the main beneficial.

Separation of Port Phillip.

The first agitation for the formation of the Port Phillip district, into a separate colony, took place towards the close of Governor Gipps's administration, and the claims of the trans-Murray residents to govern themselves were ably advocated by Dr. Lang, one of the six members returned by the district since known as the Colony of Victoria. The entire population of what is now New South Wales, Victoria, and Queensland did not, at that period, exceed 150,000, of which the Port Phillip district contributed only 30,000. Their distance from the seat of Government, nevertheless, justified the demand of the Victorians for separation, which was conceded in 1851, to their great permanent benefit. A few years subsequently, on the 1st December, 1859, New South Wales was again dismembered, losing its northern province, which was constituted a separate colony, under the name of Queensland.

Governor Fitzroy.

Sir George Gipps was succeeded as Governor by Sir Charles Augustus Fitzroy, in whose tenure of office occurred several of the most important events in the history of Australia. These, in the order of their happening, were the final abolition of transportation in 1849; the separation of Victoria in 1851; the discovery of gold in the same year, and the establishment of Responsible Government in 1855–6.

Attempt to revive transportation.

Prisoners had ceased to be sent to New South Wales in 1840, but owing to the great depression of trade which prevailed during the rule of Governor Gipps, station properties, in 1849, so depreciated in value as to threaten ruin to their holders. Many of the squatters thought that a revival of the system of assigned servants would be beneficial to their interests, and, as it happened, the Imperial Government wished at that time to possess once more a large penal colony. Two powerful interests therefore were allied in an effort to re-establish transportation, and the system of assigned servants. To meet this threatening combination, a number of public meetings were held in Sydney under the auspices of the Anti-transportation League, and an overwhelming expression of popular opinion, most vehemently adverse to the scheme, was

Attempt to revive transportation.

given; nevertheless the British Government, under the advice of Sir Charles Fitzroy, persisted in their endeavours to force prisoners upon the unwilling inhabitants of the Colony. Several ship-loads of convicts were accordingly sent out, and an attempt was made to land them in the first instance at the new settlement at Port Phillip, now the City of Melbourne. The settlers there, however, would not tolerate the proceeding, whereupon the ships were compelled to leave for Sydney and Moreton Bay, now Brisbane. One of the vessels, named the Hashemy, cast anchor in Port Jackson, and there instantly ensued a serious contest between the inhabitants and the Executive. Immediately on the fact becoming publicly known that the Hashemy was off the Heads with convicts on board, the people of the metropolis were lashed into a fever of excitement, and a great public meeting was forthwith convened to consider what steps should be taken in this pressing emergency, as it then was universally considered. The result was that the Government saw fit to forbid the landing of the prisoners at that time, not caring to face the obloquy and public indignation which the adoption of any other course would certainly have brought upon them. As, however, the Hashemy could not be sent back, and as her prisoners could not permanently remain on board, a compromise was entered into. The prisoners were removed from the ship, and a large batch sent to Moreton Bay, in order that the settlers in that district might have an opportunity of hiring them. The remainder were allowed to be assigned to various persons in the Colony, though it was stipulated that the men should not be landed in Sydney, nor employed in the county of Cumberland.

Landing of convicts forbidden.

The Legislative Council afterwards proceeded to take action in the matter, and a resolution was proposed, to the effect "that an address be presented to Her Majesty, praying that the Order in Council which declared New South Wales a Colony to which convicts might be sent be at once revoked." The adjournment of the Council was, however, agreed to before the motion could be put. In consequence of this partial shelving of the question an

Anti-transportation meetings.

Final abolition of transportation.

overwhelming public meeting was held, which petitioned the Council to use its utmost endeavours to prevent the revival of transportation in any form. The petition in a short time was signed by over 35,000 persons (more than two-thirds of the population of the metropolis). There was no resisting this manifestation of public opinion, and the pro-transportation members temporarily withdrew from the Council, whereupon the motion just stated was carried unanimously, and the address to the Queen was accordingly transmitted. The Order in Council was revoked, and transportation to New South Wales was thus, after many years of fretful agitation, absolutely and finally abolished. The discovery of gold, which shortly followed, gave a new impetus to Australian society, and by developing the industry and wealth of the country rendered a return to the "prison times" for ever impossible.

Discovery of gold.

The discovery of gold, in 1851, was by far the most important incident which had yet occurred in the annals of the country. An account of that remarkable event will be found in its proper place, but a few remarks are here called for as to the historical bearing of the great discovery. For many years previous to 1851 it was known that small quantities of gold had been found in the Bathurst district, and a colonist offered, during the administration of Sir George Gipps, to conduct the Government surveyors to a spot where he said gold existed in payable quantities. The project was, however, discouraged. The Colony was enjoying at the time a period of great prosperity, the depression of previous years having been successfully tided over; and it was probably thought unadvisable by the authorities to disturb the settled industries of the Colony, by the incitement to speculation which the gold fever would generate.

Gold fever.

A few years passed away, and the recollection of the supposed gold discoveries was still fresh in men's minds. The prosperous days with which Governor Gipps's administration closed gave place to less fortunate times. Wages were low and work scarce, when suddenly the tale of the gold discovery was on every tongue.

The first nuggets.

In the early part of 1851 nuggets began to arrive in Sydney. They had been found in the vicinity of Bathurst, and their inspection by the public raised a wave of excitement, which affected all classes. It is not surprising that the possibility of amassing a fortune in a few months—which seemed indisputable from the presence of so many specimens of gold—should have induced hundreds of people of all ranks to abandon their employments, and set out for Bathurst. Nor could news of such a nature be confined within the Colony, and before many months had elapsed, the presence of gold in Australia was known all over the world. Then followed a mighty rush, from every quarter of the globe, of the most enterprising spirits, and those physically the most capable of enduring the unknown hardships before them, a circumstance on which Australians in the future will have occasion to congratulate themselves, for the splendid physique of the early colonists, already manifested in their sons and daughters, must undoubtedly becom the inheritance of succeeding generations.

Effects of the discovery of gold.

The effect produced on society by this most fortunate discovery was unpleasant enough at first. Stations throughout the Colony were left without hands, and all ordinary occupations wer threatened with extinction, in consequence of the general exodu to the gold-fields. The squatters even petitioned the Governmen asking that martial law might be proclaimed, and all gold-diggin peremptorily prohibited, in order that the regular industrial pu suits of the country should not be interfered with. The Govern however, refused to accede to this manifestly absurd request. S great a change in the circumstances of the country as th wrought within so short a time by the gold discovery, could n fail to affect many persons prejudicially. But after a few year affairs resumed their normal course, and gold-mining found i level as one of the ordinary industries of the country. Th great and permanent benefit which resulted from the influx of enterprising population, the increase of wealth, and the cons quent development of many other industries cannot be overrate Nothing, since the introduction of wool-growing, has tended develop its resources and to make so widely known the great advantages which Australia offers to the overcrowded populations of the Old World, as the discovery of gold in 1851. Since that era the country's progress has been by leaps and bounds, and Australia, which was before regarded merely as a far off dependency of Great Britain, now takes a place amongst the nations of the world, and is in a fair way of realizing the prophetic visions of future greatness which inspired its founders.

Events preceding Responsible Government.

The series of events which led to the introduction of Responsible Government still remains to be touched upon. With a narrative of these, and an account of the actual inauguration of representative institutions—that is, with the political occurrences of 1855—this narrative will fitly close. All occurrences since that period have been treated as far as possible as matters of statistics, and will be found in their places in other parts of this volume.

Desire for self-government.

For several years before the discovery of gold there had been growing up among the colonists a strong desire for a larger measure of self-government. The position of the Colony as a Crown dependency was a galling one, especially when the population became so largely increased through the outbreak of the gold-diggings. It was felt that the old system, which might have sufficed for the government of the people when their numbers were few was quite unsuitable for so large a community as New South Wales had now become. Hence the agitation that had already been commenced in favor of a free Constitution was continued with ever-increasing force.

Victoria erected into a separate Colony.

In 1851 an Act was passed by the Imperial Parliament (13 and 14 Vict., No. 59) in accordance with which the dependency of Victoria was erected into a separate Colony, and a Constitution was to be conferred upon New South Wales. Accordingly, in 1852, a Select Committee of the Legislative Council was appointed to prepare a Constitution for the Colony in pursuance of the powers conferred by the Act above cited. The first result of the labours of the Committee was that a remonstrance was sent to the Secretary of State for the Colonies, directed not so much against the old form of government, as against the amendment of the Constitution, which it was proposed to introduce. Subsequently, after much correspondence, and the receipt of a despatch from the Secretary for the Colonies, Sir John Pakington, practically conceding all that the colonists demanded, a Committee of the Legislative Council was appointed to draft the new Constitution. It consisted of the following gentlemen:—Messrs. Wentworth, Deas-Thomson, James Macarthur, Cowper, Martin, Macleay, Thurlow, Murray, and Dr. Douglas.

Framing of the Constitution Act.

The Committee, in their report, stated that they desired to have a form of government in perfect accordance with the British Constitution, and that a conservative element ought to be constantly present in the Constitution; and for this reason they declared they did not feel inclined to hazard the experiment of an Upper House based on the general elective franchise. To provide for this Uppe House, the Committee gravely made the following recommenda tions. They proposed that an hereditary nobility should be created leaving the Crown to decide whether or not to give the first holde of a title a seat for life, and that the aristocracy, to be thu established, should, in the future, elect a certain number of thei order to form the higher branch of the Legislature. The questio of federation was also noticed in the report:—"One of the mos prominent legislative measures required by the Colony, and th colonies of the Australian group generally, is the establishment once of a General Assembly, to make laws in relation to thos intercolonial questions that have arisen, or may hereafter aris among them. The questions which would claim the exercise such a jurisdiction appear to be (1) Intercolonial tariffs and t coasting trade; (2) Railways, roads, canals, and other such wor running through any two of the colonies; (3) Beacons and ligh houses on the coast; (4) Intercolonial gold regulations; (5) Pos age between the said colonies; (6) A general court of appe from the courts of such colonies; (7) A power to legislate on other subjects which may be submitted to them by addresses fro the Legislative Councils and Assemblies of the colonies, and to appropriate to any of the above mentioned objects the necessary sums of money, to be raised by a percentage on the revenues of all the colonies interested."

Hereditary nobility proposal.

This report, when it was made public, caused a good deal of commotion in the metropolis, and at a public meeting held at the Royal Hotel, the following energetic protest against part of the scheme was adopted:—"That this meeting views with surprise, and strong feelings of opposition, the scheme proposed for the political constitution of the Colony, especially in respect to the establishment of an Upper House of Crown nominees, and a certain unprecedented order of colonial nobility;" and a further resolution decided that "a larger meeting should be held, in order to record a protest against a measure so repugnant to the feelings of British subjects, and fraught with so much danger to the political rights of the people." A more numerous meeting was accordingly held, the principal speakers at which were Mr. (now Sir Henry) Parkes, Messrs. Robert Johnson, Montefiore, Deniehy, Mort, Piddington, Flood, and Archdeacon McEncroe.

The new Constitution adopted.

In spite of these meetings the Council proceeded to debate the Report as it stood. After a great deal of opposition to the retention of the "aristocratic" clause, and after the holding of more public meetings, the "Constitution Act," the basis of the rights we now enjoy, was finally passed on the 21st December, 1853. This Act established two Legislative Chambers. The first was to consist of not less than twenty-one natural-born or naturalized subjects, four-fifths of whom were to be persons not holding any office of profit under the Crown, who were to be nominated by the Governor in the name of the Queen. The first members were to hold their seats for five years, at the expiration of which period all appointments were to be made for life. The President was to be appointed by the Crown. The Legislative Assembly was to consist of fifty-four members, the qualification for the franchise being fixed as follows:—All inhabitants of full age, being native-born or naturalized subjects of the British Crown, and not having been convicted of any crime—or, if convicted, pardoned—and having paid all rates and taxes for which they were liable, were placed in the condition precedent required for either voting or being elected to the Assembly, but they were required, in addition, to be qualified in the following respects:—As the owner of a freehold estate of £100; as householders, lodging occupiers, or leaseholders for three years at £10 per annum. To these were added boarders at £40 per annum, persons receiving £100 a year salary, and pasture-license holders for one year. Ministers of religion were declared incapable of being elected to the Legislature. Subsequent alterations to the Constitution Act removed that restriction, and made the principle of universal manhood suffrage the basis of the electoral system of the Colony, though non-resident property holders are still entitled to the franchise under certain conditions. A full account of the parliamentary system will be found under the chapter of this work treating of the constitution of the Colony.

Inauguration of Responsible Government.

Before the constitution could become operative it was necessary that the sanction of the British Parliament should be obtained, and for this purpose Wentworth, whose name has become identified with the establishment of responsible government, and E. Deas-Thomson, were authorized by the Council to proceed to England in order to do what lay in their power to facilitate the passage of the necessary measure. Accordingly, about the middle of the year 1855 an Act was passed by the Imperial Parliament empowering the Queen to assent to the Bill drawn up by the Council, and on the 19th December, the new Constitution was formally inaugurated by the new Governor-General, Sir William Denison, who had just succeeded Fitzroy, being sworn in afresh under a Commission from the Queen, which revoked his former credentials and appointed him "Governor-in-Chief" of New South Wales. The writs for the first parliament were issued on the 22nd May of the following year.

Succession Governors.

The succession of Governors from the foundation of the Colony to the present time is given in the following table :—

Names.	From	To
Captain A. Phillip, R.N.	26 Jan., 1788	10 Dec., 1792.
Captain F. Grose (Lieutenant-Governor)	11 Dec., 1792	12 Dec., 1794.
Captain Paterson, New South Wales Corps (Lieutenant-Governor).	13 Dec., 1794	1 Sept., 1795.
Captain Hunter, R.N.	7 Sept., 1795	27 Sept., 1800.
Captain P. G. King, R.N.	28 Sept., 1800	12 Aug., 1806.
Captain W. Bligh, R.N.	13 Aug., 1806	26 Jan., 1808.
During Governor Bligh's suspension the Government was successively administered by—		
Lieutenant-Colonel G. Johnston Lieutenant-Colonel Foveaux Colonel William Paterson	26 Jan., 1808	28 Dec., 1809.
Major-General L. Macquarie	1 Jan., 1810	1 Dec., 1821.
Major-General Sir T. Brisbane, K.C.B.	1 Dec., 1821	1 Dec., 1825.
Colonel Stewart, 3rd Regiment (Acting Governor).	6 Dec., 1825	18 Dec., 1825.
Lieutenant-General R. Darling	19 Dec., 1825	21 Oct., 1831.
Colonel Lindsay, C.B. (Acting-Governor)	22 Oct., 1831	2 Dec., 1831.
Major-General Sir Richard Bourke, K.C.B.	3 Dec., 1831	5 Dec., 1837.
Lieutenant-Colonel K. Snodgrass (Acting Governor).	6 Dec., 1837	23 Feb., 1838.
Sir George Gipps	24 Feb., 1838	11 July, 1846.
Sir Maurice O'Connell (Acting Governor)	12 July, 1846	2 Aug., 1846.
Sir Charles A. Fitzroy	3 Aug., 1846	17 Jan., 1855.
Sir William Thomas Denison, K.C.B.	20 Jan., 1855	22 Jan., 1861.
Lieutenant-Colonel John F. Kempt (Administrator).	23 Jan., 1861	21 Mar., 1861.
The Right Honorable Sir John Young, K.C.B., G.C.M.G. — Administrator	22 Mar., 1861	15 May, 1861.
The Right Honorable Sir John Young, K.C.B., G.C.M.G. — Governor-in-Chief	16 May, 1861	24 Dec., 1867.
Sir Trevor Chute, K.C.B. (Administrator)	25 Dec., 1867	7 Jan., 1868.
Right Honorable the Earl of Belmore, P.C.	8 Jan., 1868	22 Feb., 1872.
Sir Alfred Stephen, Knt., C.B. (Administrator).	23 Feb., 1872	2 June, 1872.
Sir Hercules George Robert Robinson, G.C.M.G., Governor-in-Chief.	3 June, 1872	19 Mar., 1879.
Sir Alfred Stephen, K.C.M.G., C.B. (Lieutenant-Governor).	20 Mar., 1879	3 Aug., 1879.
The Right Honorable Lord Augustus William Frederick Spencer Loftus, P.C., G.C.B.	4 Aug., 1879	9 Nov., 1885.
Sir Alfred Stephen, G.C.M.G., C.B. (Lieutenant-Governor).	10 Nov., 1885	11 Dec., 1885.
The Right Honorable Charles Robert, Baron Carrington, P.C., G.C.M.G.	12 Dec., 1885	1 Nov., 1890.
Sir Alfred Stephen, G.C.M.G., C.B. (Lieutenant-Governor).	3 Nov., 1890	15 Jan., 1891.
The Right Honorable Victor Albert George, Earl of Jersey, P.C., G.C.M.G.	15 Jan., 1891	(still in office.)

PART II.

Limits and Area.

Boundaries of the Colony.

THE Colony of New South Wales lies almost entirely between the 29th and 36th parallels of south latitude, and between the 141st and 153rd meridians east of Greenwich. It is bounded on the east by the Pacific Ocean, to which it presents a coast-line extending over 700 miles, from Point Danger at its north-eastern extremity to Cape Howe at the south-east. From the point last mentioned, which is also the north-east limit of the Colony of Victoria, it is bounded by an imaginary line, running in a north-westerly direction to the source of the Indi, a stream rising at the foot of Forest Hill, a few miles south of the Pilot Mountain, one of the most conspicuous peaks of the Australian Alps. The southern boundary of the Colony follows the course of the Indi, and afterwards of the Murray, into which the first-named stream ultimately merges, as far as the 141st meridian of east longitude. The intersection of the Murray with this meridian forms a common point of the three Colonies of New South Wales, Victoria, and South Australia.

On the west, the Colony is separated from South Australia by the line of the 141st meridian, as far as its intersection with the 29th parallel of south latitude, at which point New South Wales, South Australia, and Queensland touch. Commencing at this point, the northern boundary of the Colony follows the 29th degree of latitude, till it is crossed by the Macintyre River, one of the upper branches of the Darling, not far from the 149th meridian. Thence it follows the course of the Macintyre upward, to the junction of its tributary, the Dumaresq; leaving the Macintyre it follows the tributary stream till it meets a spur extending from the main Dividing Range to the junction of Tenterfield Creek and the Dumaresq. The boundary runs along this spur until it joins the main range, thence, almost parallel to the coast, it follows the Dividing Range to Wilson's Peak, where the Macpherson Range branches eastward. Following the last-named range, the northern boundary reaches the coast at Point Danger.

Area.

The area comprised within these limits is estimated at 310,700 square miles, or 198,848,000 acres, being a little over two-and-a-half times that of Great Britain and Ireland. Excluding the surface covered by rivers and lakes, the area would be 195,882,150 acres or about 306,066 square miles.

Length and breadth.

The length of the Colony, from Point Danger on the north to Cape Howe on the south, is 680 miles. From east to west, along the 29th parallel, the breadth is 760 miles, while diagonally from the south-west corner, where the Murray passes into South Australia, to Point Danger, the length reaches 850 miles.

PART III.

Physical Configuration.

THE surface of New South Wales is divided naturally into three distinct zones, each widely differing in general character and physical aspect, and clearly defined by the Main Dividing Range, which traverses the country from north to south. The table-land, which forms the summit of this range, comprises one of the zones above mentioned, and marks the division between the coastal region, forming the eastern watershed, and the great plain district of the interior.

MOUNTAINS, TABLE-LAND, ETC.

Dividing Range. The Main Dividing Range runs almost parallel to the coast, at no great distance from it. On the eastern edge of the table-land the mountains rise abruptly to a height which averages between 2,000 and 3,000 feet, while on the western side they slope gradually towards the great central plain. The geographical centre of the whole mountain system of South-Eastern Australia lies in the south-eastern portion of New South Wales, close to the confines of Victoria. Here some of the peaks rise to a height of over 7,000 feet above the level of the sea. Mount Kosciusko and Mount Townsend, two of the highest peaks of the Australian Alps, attain an elevation of 7,328 feet and 7,260 feet respectively.

Central Plateau. The central plateau, which these heights dominate, becomes subdivided into several branches, marking the watershed of three distinct river systems. The eastern watershed extends throughout the whole length of New South Wales and Queensland, and drains into the Pacific Ocean. The western watershed, embracing a portion of the three eastern colonies, is drained by the river system of the Murray and Darling into the Southern Ocean. In the southern watershed the Snowy River has its source, its upper basin being entirely in New South Wales, although its waters flow through Victoria and enter the sea near Bass' Straits.

The south-eastern portion of the Colony.

The south-eastern portion of the Colony has the appearance of having been convulsed by some great physical disturbance. The mountains are rugged, and their slopes abrupt, as is also the case in other portions of the Dividing Range, particularly in the Blue Mountains and the eastern parts of New England; but the width and altitude of the table-land are greatest in this portion of the Colony. The average height of the Snowy and Muniong Ranges, which belong to this district, reaches 5,000 feet; the width of the plateau, in the direction of east and west, may be set down as 100 miles. The altitude of the Monaro district averages 2,000 feet above the sea level; but as the table-land runs northward it decreases greatly in height and in width, until it narrows to only a few miles, with an elevation of scarcely 1,500 feet.

Blue Mountains.

The table-land rises again at the Blue Mountains, where the principal summits attain a considerable elevation, Mount Beemarang reaching 4,100 feet. The general level of the plateau itself will be best understood when it is remembered that the great western railway of the colony traverses a district in these mountains, of which the Clarence siding, Mount Victoria, Mount Wilson, and Blackheath are stations, situated at an elevation of over 3,000 feet. The dividing chain again decreases gradually in its spread northward of the Blue Mountains, until, as a comparatively narrow chain, it divides the waters of the Goulburn and the Hunter, on the eastern slope, from those of the Namoi and the Castlereagh, on the western. The mass once more widens out in the Liverpool Ranges, where Mount Oxley stands conspicuous, at a height of 4,500 feet, whilst, still further north Ben Lomond, reaches 5,000 feet, and the table-land maintains an average altitude of 3,000 feet, giving to this district, although situated at no great distance from the tropics, the climate and aspect of much higher latitudes.

Mountain scenery.

Narrow valleys and deep gorges everywhere break the continuity of the Dividing Range. Such is especially the case in the Blue Mountains, where the scenery is of striking and characteristic grandeur. The table-land everywhere presents one strange peculiarity. The level land suddenly terminates, and many hundred feet below, as far as the eye can reach, wooded valleys extend, whose undulating floors are walled in by sandstone cliffs, of height so enormous as to be without parallel elsewhere in the world. At the bottom of these valleys small rivulets and tiny streams, fed by waterfalls from the table-land, trace their way, under an ever verdant dome of graceful tree-ferns and giant eucalypti.

The mountain scenery of this part of New South Wales produces on the traveller an entirely new impression. There are no snow-capped peaks upon which the rising and setting sun produces strange and magnificent colour effects; nor does any peculiar shape of the summits strike the imagination, as in the Alps and Pyrenees of the Old World. On the contrary, from the plains the New South Wales mountains look rather insignificant. But gazing from the edges of the high table-land into the deep valleys below, the mind is awed by the realization of the magnificent scale on which Nature has worked in these solitudes. In many places the cliffs rise 2,000 feet perpendicularly from the valley beneath, and the hills at their feet, formed by the accumulation of débris from their sides and from the plateau above, appear as slight undulations. The valleys and sides of the gorges, wherever there is soil, are clothed with dense vegetation, and over all is the mantle of blue haze, which makes the whole effect most striking, and has given to the range visible from Sydney its appropriate name.

Coast Ranges.

The main range throws off many spurs towards the sea on the astern slope. These divide the waters of the numerous rivers which flow into the Pacific Ocean. Almost everywhere between he coast range and the sea the country is hilly and serrated, more particularly in the southern portion of the Colony. In the Illawarra district, 50 miles to the south of Sydney, the mountains kirt the very edge of the coast, presenting towards the ocean a perpendicular face of cliffs nearly 1,000 feet in height. Further north there are wider valleys, and greater stretches of country available for tillage and pasture.

The western slope is entirely different. Numerous ramifications f the general mountain system are thrown off, but all slope gently owards the great central plain of the interior. So gentle, indeed, s the declivity, that the dividing lines of the various watersheds as they extend westward, are scarcely visible, being only indicated by a succession of low ridges and isolated elevations.

Western Mountain system.

In the extreme west of the Colony, verging on South Australia, another mountain system exists, forming the western edge of an immense depression, through which the largest rivers of the Australian continent hold their devious course. The Great Barrier and the Grey Ranges are part of this system. They consist of low hills, hardly rising to the dignity of mountains, culminating in a few solitary peaks, such as Mount Arrowsmith and Mount Lyell, which attain an elevation of only 2,000 feet above sea level.

Traces have been found of the existence at some earlier period of a range of primary rocks, extending from Orange to Cobar and Wilcannia, forming the watershed between the Lachlan and part of the basin of the Darling. The range no longer exists as a landmark, for, owing to denudation, it has almost entirely disappeared.

Mountains below limit of perpetual snow.

The whole mountain system of New South Wales lies below the limit of perpetual snow. On the south-eastern slopes of the Snowy Ranges, however, and on the summits of the high peaks of the Australian Alps, snow sometimes lingers throughout the year.

LAKES OF THE MOUNTAIN REGION.

On the summit of the Main Dividing Range, and within a few miles of the inland towns of Goulburn, Queanbeyan, and Braidwood, two of the principal lakes of the Colony are situated. Lake George is 16 miles in length and 6 miles in width, draining a basin whose area is about 490 square miles. The lake is situated at an elevation of 2,200 feet above the sea, and the scenery around it is very beautiful. This lake exhibits the phenomenon of a large drainage area without a visible outlet; for though it receives many small water-courses no stream leaves it. Lake Bathurst, a few miles eastward of Lake George, is another depression on the summit of the Dividing Range, and covers in ordinary seasons an area of about 15 square miles. It is similar in character to Lake George, having no outlet to the sea. Both lakes, in periods of great drought, shrink considerably in area; but Lake George in most seasons is a fine sheet of water, and now that the railway to Cooma skirts its shores, the attractiveness of its scenery makes it a favourite resort of tourists.

Lake George.

Lake Bathurst.

THE COASTAL REGION.

Rivers of New South Wales.

Rivers.—The main range already described, traversing the country from north to south, gives rise to numerous rivers flowing into the South Pacific. Compared with the western rivers those of the eastern slope appear insignificant enough. But compared with the principal rivers either of England or France, their relative size and importance are at once manifest.

The Tweed and Brunswick.

In the extreme north of the Colony, the Tweed and Brunswick Rivers flow through a rich country, of semi-tropical aspect. Their courses are short, and bar entrances render them navigable only for small craft.

The Richmond.

A few miles south of the Brunswick, the Richmond descends from the heights of the Macpherson Range, on the slope of Mount Lindsay, one of the highest peaks of the northern table-land. The river has three branches, and is navigable on the main arm as far as Casino, 62 miles, and on Wilson's Creek to Lismore, 60 miles from the sea. The Richmond drains an area of about 2,400 square miles of country, rugged in its upper basin, and heavily timbered, and in its lower course, flowing through rich alluvial land, where the produce of semi-tropical climes grows luxuriantly.

The Clarence.

Immediately south of the last-named stream is the Clarence—the largest river on the eastern watershed. It takes its rise in a spur of the Main Dividing Range, and runs in a south-easterly direction for 240 miles, carrying a considerable body of water through one of the richest districts of the Colony, and emptying itself into the Pacific at Shoal Bay. The upper part of its basin is very rugged, so much so that its principal tributaries, the Mitchell, Nymboi, Timbarra, and Orara Rivers, rising in the New England table-land, between Armidale and Tenterfield, all flow in an opposite direction to the course of the main stream, generally trending to the north-east, and even, in the case of the Orara, to the north-west. The Lower Clarence is a magnificent stream, averaging half a mile in width from its mouth upwards, for nearly 50 miles, and is navigable for 67 miles, as far as Copmanhurst. Ocean-going steamers of large tonnage ascend the river as far as Grafton, 42 miles from the sea. The area of country drained by the Clarence is over 8,000 square miles, or nearly half as large again as the basin of the Thames, whose course is about as long as the Clarence, but navigable for only 60 miles.

The Bellinger.
The Nambuccra.

Two short rivers, the Bellinger and the Nambuccra, both navigable for some distance by small craft, enter the Pacific between the Clarence and Trial Bay.

The Macleay.

Into Trial Bay, the Macleay, one of the principal rivers of the coast, discharges after a course of 200 miles from its source near Ben Lomond. With its principal feeders, the Gyra and the Apsley, the Macleay drains an area of 4,800 square miles of country, the upper part of which, especially that portion through which the Apsley flows, is extremely rugged and precipitous. Series of waterfalls, some of which have a perpendicular descent of over 200 feet, mark the course of this stream as it runs through narrow gorges, whose sides rise in places to a height of about 2,000 feet. In its lower course the valley widens very considerably into magnificent alluvial plains, fast becoming the home of a numerous and thriving population. The Macleay is navigable for more than 30 miles, as far as the town of Greenhills, a few miles above Kempsey. The country through which it flows is for the most part thickly timbered.

The Hastings.

The Hastings is the next stream met with, emptying itself into the sea at Port Macquarie. The country which it drains is rich, undulating, and densely wooded, and the area within its watershed is 1,400 square miles. Its chief arm is formed by the Wilson and Maria Rivers, on the left bank, the latter joining the main stream at Port Macquarie.

The Manning.

The Manning rises in the Main Dividing Range, and flows almost due east through a prosperous district, rapidly becoming settled. The valley through which it flows is densely wooded, and the agricultural land on both sides of the river is unsurpassed for fertility. The Manning has a length of 100 miles, and, like most of the rivers of the seaboard, its course lies through undulating country, broken in the upper portion, but widening out as it nears the sea. Its chief tributary is the Barrington, on the right bank; on the left it receives the Barnard River, the Dawson, the Lansdowne, and other small streams. The river is navigable for ocean-going vessels as far as Wingham, about 20 miles from its mouth.

Before reaching the Hunter, several small streams are met with, amongst which may be mentioned the Woliomba and Maclean, falling into Wallis Lake, the Myall, which empties into Myall Lake, and the Karuah, which reaches the ocean at Port Stephens.

The Hunter.

The Hunter is one of the chief rivers of the Colony, and has its source in the Liverpool Range. It flows first in a southerly

River the stream is known as the Warragamba, which n
retains until its junction with the Nepean. This river r
the coast range overlooking Wollongong, and together w
tributary streams, the Cataract and Cordeaux, forms the
of the water-works from which Sydney now draws its s
Though smaller than the Warragamba, the Nepean gives its
to the united waters of the two streams. After receivi
Nepean the river flows along the foot of the Blue Mou
through a rich valley highly cultivated. From the Blue Mou
two streams add their waters to it, the Grose and the Col
from the junction of the last named the river is call
Hawkesbury. From the Colo junction the river still runs
ward until it is joined by the Macdonald, an important s
navigable for some distance above its confluence with the H
bury. The Macdonald comes from the north, and joins th
on the left bank. The Hawkesbury, after turning to th
holds its course through broken country, the scenery of whi
been pronounced equal to any other river scenery in the
and finally reaches the sea at Broken Bay. The course
Hawkesbury extends over 330 miles, and the drainage are
be set down as 8,000 square miles. Navigation is possible
as Windsor, 70 miles from the mouth, and a little dredging
enable sea-going vessels to reach this town.

The Hawkesbury.

In the neighbourhood of Sydney some small streams fa
Botany Bay. Two of these, the Woronora and George's
have their sources on the eastern slope of the ranges in whi
Nepean, Cordeaux, and Cataract rise, and after rapid course
their waters before falling into the bay.

Rivers south of Sydney.

Generally speaking, the rivers south of Sydney are
importance than those to the north, as the width of the
strip narrows considerably. The Shoalhaven, nevertheless,
more than passing notice. It rises in the coastal range and
the direction of the coast, flowing northerly through deep
marked by magnificent scenery peculiarly Australian. T

for vessels in stress of weather, and a refuge in time of danger. Fortunately, however, harbours of refuge are not often required. The coast of the Colony is singularly free from cyclones, hurricanes, and like visitations. Gales are certainly not unknown, nor are casualties infrequently recorded; but the coast is very safe, and disasters are in many cases to be attributed to causes which ordinary prudence would have avoided.

Byron Bay.

Inside Cape Byron, in the north of the Colony, the bay of the same name offers shelter to vessels trading to Queensland, in all but north-east weather. A large pier has been constructed, by which the produce of the neighbouring districts of the Brunswick and Tweed may be shipped, when an entrance to these rivers is impracticable.

Shoal Bay.

At Shoal Bay, the entrance to the Clarence, the anchorage is safe and commodious, and when the works designed for improving the river entrance are completed, it promises to be one of the best ports on the coast.

Trial Bay.

Trial Bay, at the mouth of the Macleay, affords ample shelte and safe anchorage. The Government have erected a large priso on the hill overlooking the Bay, and are now utilizing th prisoners' labour in constructing a breakwater, with the view o making Trial Bay not only a harbour of refuge, but a shippin port. When this design is accomplished, there is every reason t suppose that it will become one of the most frequented places o the coast, as the resources of the Macleay District are great an rapidly developing.

Port Macquarie
Port Stephens.

Port Macquarie, at the mouth of the Hastings, and the harbou at Forster, near Cape Hawke, afford good anchorage. Por Stephens, a little further south, offers at all times the most saf and commodious harbour desirable. As a natural port it is hardl inferior to Port Jackson, and the scenery of its shores is ver beautiful. At present, Port Stephens is little used, owing to it proximity to Newcastle, and the sparseness of the population in it immediate district.

Port Hunter.

Twenty miles further south is Port Hunter, at the mouth of the river of that name. When first used, the harbour was inconvenient and somewhat dangerous; but this has been altered entirely by the breakwaters and training walls which have been constructed. Newcastle harbour is now safe and roomy, with shipping facilities equal, if not superior, to those found in any other Australian port. Magnificent wharves line its shores, provided with hydraulic and steam cranes of the most modern type. The length of wharf frontage at Newcastle is two miles, the trade is large and increasing, and the city ranks third amongst Australasian seaports. The importance of Newcastle is mainly due to the existence of immense coal deposits in its neighbourhood, which supply not only all the Australian Colonies, but the China seas, and the Pacific slopes of the United States, and the countries bordering on the Spanish main. Latterly, too, large shipments of wool have been made direct to English ports, Newcastle having direct communication by railway with the northern districts of the Colony.

Lake Macquarie.

A few miles further south is Lake Macquarie, in the centre of the coal-field of the Newcastle district, and covering an area of 44 square miles. The great drawback to the lake as a shipping port has been the shallowness of its entrance; but extensive dykes and training walls are being constructed, which have already increased the draught of water in the channel, and with some further improvements Lake Macquarie will become an important shipping place.

Broken Bay.

Broken Bay, 15 miles north of Port Jackson, forms the mouth of the River Hawkesbury. It has a bold entrance, and on Barranjoey, the southern headland, is erected a fine lighthouse. The bay has three branches, Brisbane Water being the northern, the Hawkesbury mouth the centre, and Pittwater the southern arm. The first-named opens out into a series of lakes, and the town of Gosford, standing at the head of one of them—the Broadwater—is the centre of an important district. The scenery at and around Broken Bay is characteristically Australian, and in natural beauty rivals even Sydney Harbour. South of Broken Bay the coast-line is a succession of high cliffs and sandy beaches.

Port Jackson.

The entrance of Port Jackson lies between perpendicular cliffs of sandstone several hundred feet high, and only 74 chains, or nearly 1 mile, apart. Sydney Harbour has been too often described to require a lengthy reference here. It holds the first place amongst the harbours of the world for convenience of entrance, depth of water, and natural shipping facilities. Its natural beauties are the charm of all who visit its shores, and in the quiet waters of its numerous bays and coves the navies of the world might securely rest. The area of water surface of the harbour proper is 15 square miles, and the shore-line is 165 miles in circuit. At the South Head is erected a splendid light-house, fitted with an electric arc light, the power of which is scarcely exceeded on any coast. On the shores of Port Jackson stands Sydney, the capital of New South Wales and the mother city of the Australias. The city and its suburbs occupy 137 square miles, and have within their boundaries about 400,000 people.

Botany Bay.

Botany Bay, the first port entered by Captain Cook, the discoverer of this territory, lies a few miles south of Sydney. It covers an area of 24 square miles, and receives the waters of several small rivers. The bay has very little trade, by reason of its proximity to Sydney, but it is frequented by craft in search of shelter during stress of weather.

Wollongong and Kiama.

Wollongong, Kiama, and Ulladulla are small harbours which have been snatched, as it were, from the sea, and are important shipping places.

Jervis Bay.

About 80 miles to the south of Sydney the coast is broken by an important inlet called Jervis Bay. Its entrance is 2 miles wide, and on its bosom safe anchorage may be found in any part. It is surrounded by rich agricultural and mineral country, as yet, unexploited. Nature has been so bountiful to the country as a whole, that particular districts, undoubtedly rich, must remain for a while undeveloped, through want of labour and capital to open them up, and ports which would in older countries be prized for their convenience and capacity, here remain unused, save as refuges in stormy weather.

Bateman's Bay.

Bateman's Bay, at the entrance to the Clyde, is an inlet of some importance, and coastal steamers also load produce at the mouths of the Moruya, Tuross, and Bega Rivers.

Twofold Bay

Twofold Bay is a magnificent sheet of water, near the southern limit of the Colony. Formerly it was the seat of a large whaling trade, now no more. It is well sheltered, and a fine jetty affords ample shipping facilities. Its trade is chiefly with the neighbouring colonies, in produce and live stock, the bay being the nearest outlet on the sea coast for the rich district of Monaro. A railway is planned to connect the port with the table-land and the metropolis, and Twofold Bay promises to become a considerable shipping place in the near future. On its shores is situated the town of Eden.

Coastal Lakes.

Besides the ports and harbours, properly so called, which have been above enumerated, there are several lakes, or arms of the sea, which will, with the development of the resources of the country, become ports of shipment. From Cape Hawke to Port Stephens a chain of lakes extends, communicating with the latter through the Myall River, and covering a large area. The most extensive are Wallis Lake, Myall Lake, and the Broadwater. The country round about is richly timbered, but its resources are still undeveloped. Between Lake Macquarie and Broken Bay is Tuggerah Lake, also an extensive sheet of water. Near Wollongong is Lake Illawarra, of considerable area, but shallow, and towards the south of the colony are Coila and Tuross Lakes, into which the Tuross River discharges.

ISLANDS.

Islands.

No islands of any note belong geographically to New South Wales. The Broughton Islands, lying a few miles northward of the Heads of Port Stephens, are the largest in extent. Solitary Island, situated near the northern part of the coast, between the Bellinger and Clarence Rivers, and Montague Island, 18 miles south-east of the Moruya River estuary, have been selected as the sites for light-houses, but are not otherwise important. Norfolk Island, having an area of 8,607 acres, and also Lord Howe Island, belong politically, but not geographically, to New South Wales. The last-named island has an area of 3,220 acres.

Norfolk Island.

WESTERN WATERSHED.

The Western Watershed.

The western watershed of the Colony is in physical features and geographical character the antithesis of the eastern. Instead of a narrow strip of country shut in by the sea and mountains, intersected by numerous short rivers with a rapid flow, the western watershed forms a vast basin through which the quiet waters of a few great rivers have their long, though uncertain, courses. The rivers of the western region of the Colony all belong to the fluvial system of the Murray, which carries to the Southern Ocean, through the colony of South Australia, the drainage of a watershed immense in extent, embracing the northern portion of Victoria, and the western and larger part of New South Wales, and reaching almost to the centre of Queensland.

The Murray.

The Murray, or Hume, the southern branch of this vast river system, rises in the Snowy Mountains, from which its three principal sources, the Hume, the Tooma, and the Indi descend. The first two of these streams rise on the northern and western slopes of Mount Kosciusko; the Indi, which is really the main river, has a longer course, rising in a gully near the Pilot Mountain, at an elevation of 5,000 feet above the sea. From the confluence of these rivers, the Murray rapidly descends towards the plains below Albury, where it is only 490 feet above sea level, and has still a course of 1,439 miles to run. From Albury downwards the river receives many tributaries on both banks, those from New South Wales being the most important. Above Albury the tributaries are for the most part mountain torrents, carrying to the main stream the melted snows of the Australian Alps. In its lower course, however, the Murray is augmented, through the Murrumbidgee and Darling, by the waters of secondary systems as important as its own.

Ana-branches.

The Edward.

Before being joined by the Murrumbidgee, the Murray receives, from a series of ana-branches, the drainage of a large portion of the country lying between the two main streams. The Billabong Creek runs almost through the centre of the plain spreading between the Murray and Murrumbidgee; in the middle of its course it communicates with the latter river, through Colombo and Yanko Creeks, whilst on the south it feeds the Murray by the channel of the Edward River. The Edward is itself an important stream. It forms with the Wakool and Tuppal Creeks, and many other smaller and less important watercourses, a fluvial system, interlacing the whole country from Tocumwal to the Murrumbidgee junction, which has been justly named Riverina. The Edward and Wakool are together navigable for over 400 miles, as far as the important town of Deniliquin. From its furthest source at the foot of the Pilot Mountain to the town of Albury the Murray has a length of 280 miles. Thence to the Darling River junction its course is 852 miles, and from that point to the sea, below Lake Alexandrina, it is 587 miles in length. The river has thus a total course of 1,719 miles, of which 1,132 are within the colony of New South Wales. The river has been navigated as far as the Ournie gold-field, about 150 miles above Albury, and 1,590 miles from its mouth.

The Murrumbidgee.

Murrumbidgee Basin.

The Murrumbidgee has its source at the foot of a hill overlooking the Coolaman Plains, at a height of nearly 5,000 feet above the sea. Its course first shapes itself southward, but near the town of Cooma it takes a sharp curve and runs in a northerly direction until it nears Yass. Here it curves again, trending to the west in a line parallel to the Murray, but turning south-west on receiving the Lachlan, it finally joins the main river after a course of 1,350 miles.

The area drained by the Murrumbidgee is estimated at 15,400 square miles. In the upper part of its course it receives from both sides numerous rivers and creeks, the most important of which are the Umaralla, Molonglo, and Yass Rivers on its right, and the Goodradigbee, and Tumut Rivers on its left bank. All these rivers flow through mountainous country over a series of plateaux, which from the Coolaman and Coorangorambula Plains to the plains round Gundagai and Wagga successively diminish in height from 5,000 feet to 720 feet and 607 feet above the sea.

The upper valleys.

The upper valleys, both of the Murrumbidgee and the Murray, are of similar physical aspect. Both rivers are snow-fed, the Murray to a greater extent than its tributaries, owing to the higher elevation of the mountains and plateaux from which it descends. In the lower basins they are also similar in character, and the plains which they drain are amongst the most fertile in the Colony. With an intelligent system of water conservation and irrigation the lower valleys of these rivers would support a large population of agriculturists on land hitherto devoted entirely to sheep pasturing.

The Lachlan.

The chief tributary of the Murrumbidgee is the Lachlan, rising in the main Dividing Range, where also its principal feeders have their source. These are the Boorowa, Crookwell, Abercrombie, and Belubula, all rapid streams, occasionally swollen by melting snow from the table-land. After receiving the Boorowa the Lachlan flows to the Murrumbidgee, through 500 miles of plain country, without receiving any tributary of permanent character. The water-courses which carry off the surplus water from the rich plains on either side of the river, only reach it in time of flood. The total length of the river is 700 miles, and its basin has an area of 13,500 square miles. The country drained by the Lachlan is similar in most respects to that of the Murray and Murrumbidgee, and with regular rainfall or irrigation, the light r soil and sandy loam of its lower valley would yield abundant retur to the farmer. The lines of demarcation between the Lachlan basin and that of the Murrumbidgee on the south, and the Darling on the north-west, are hardly perceptible on the ground, so flat is the country through which these great rivers flow.

The Darling.

Of all the tributaries of the Murray, the Darling drains the largest area, extending as it does over the greater portion of the western district of New South Wales, and embracing nearly all Southern Queensland. From its confluence with the Murray at Wentworth up to its junction with the Culgoa a few miles above Bourke, the Darling receives only two tributaries, the Paroo and the Warrego, both intermittent, though of vast size in times of flood. For over 1,000 miles this great river holds its solitary course, Nile-like, feeding the thirsty plains of the south with water falling many hundred miles distant on the downs of Queensland. The course of the river is tortuous in the extreme; in many places a narrow neck of land, a mile or two across, separates parts of the river 20 miles distant, if the stream were followed. The Darling presents the phenomenon, not uncommon in Australian rivers, of banks much higher than the plain behind, indeed the river bed itself, though from 30 to 40 feet beneath the bank, is in some places but little below the general level of the country. Successive floods have added to the height of the banks, and have raised the bed of the stream correspondingly.

The Upper Darling.

The Darling has no source under that name, which applies only to that part of the river as far as the Bogan junction. Above this point it takes the name of the Barwon, until its confluence with the Gwydir, then it is known as the Macintyre, and afterwards the main branch receives the name of the Dumaresq. The last-named stream has its source in the Dividing Range, on the summit of the table-land at the extreme north-east of the Colony, not far from the head of the Richmond. The Dumaresq, Macintyre, and Barwon form, however, what might be really called the Upper Darling, and this appellation would be geographically accurate. The variety of names, by which not only the Darling, but many other Australian rivers are known, is due to the fact that they were discovered in sections, the identity of which was not established until years afterwards, and the sectional names have survived.

Tributaries of the Darling.

The Darling receives, in its upper course, many tributaries, which drain the southern portion of Queensland, but these rivers only flow for a short part of their courses in New South Wales. Chief among them are the Mooni, Narran, Bokhara, Culgoa, Warrego, and Paroo. The principal affluents of the Darling within the boundaries of New South Wales are on the left bank. The Gwydir, Namoi, Castlereagh, Macquarie, and Bogan are the most important. These streams are all of considerable length and similar in character, their upper valleys are on the table-lands, and their lower courses lie through alluvial plains and good pastoral country. The Darling is navigable, in times of freshets, as far as the township of Walgett, 1,758 miles from its confluence with the Murray, thence to the sea the distance is 587 miles, making a total length of navigable water from Walgett to the sea of 2,345 miles, and it therefore ranks high amongst the rivers of the world, as estimated by navigable length. Unfortunately, however, its upper course is open only during part of the year.

Length of navigable water

If the fluvial system of the Murray and Darling, and their principal tributaries, be considered in the light of the facilities it affords for water carriage, its value will appear not inconsiderable. The Darling River may be made available for navigation for 1,758 miles, from Wentworth to Walgett, the Murrumbidgee and Lachlan combined have 900 miles, and the Murray, from Ournie gold-field to the point where it enters the territory of South Australia, has a length of 1,120 miles. If to this be added the navigable length of the Wakool and Edward, the total distance of river which could be navigated reaches nearly 4,200 miles, in the western district alone, a length nearly twice that of the railways of the Colony.

LAKES OF THE WESTERN DISTRICT.

Western Lakes.

Here and there along the course of the western rivers are found lakes sometimes of considerable dimensions. These lakes are in reality shallow depressions, receiving water from the overflow of the rivers in times of flood, and in return feeding them when the floods have subsided. Lake Urana is the most important in the Murray and Murrumbidgee basin, and Lakes Cowal, Cudgellico, and Waljeers, in that of the Lachlan. Along the Darling are Lakes Poopelloe and Gunyulka on the left bank and Laidley's Ponds and Lakes Pammaroo, Jandoo, and Cawndilla on the right, near Menindie. On the South Australian frontier are Lake Victoria, formed by the overflow of the Murray, and others of less importance. The area of these lakes is undefined, as they vary in size according to the rainfall, sometimes covering vast extents of country, and at others being reduced to the proportions of mere waterholes, whilst in seasons of great drought they are absolutely dry.

PART IV.

Climate.

IT is accepted as an ascertained fact that the temperature of lands in the southern hemisphere is lower than that of countries situated in corresponding latitudes north of the equator; to this general law New South Wales is no exception. The researches of the Government Astronomer of the Colony conclusively confirm this, and show, from the records of temperature extending over many years, that the climate of New South Wales is one of the most temperate and uniform anywhere experienced. Just as the country is divided naturally into three distinct geographical regions, so it is separated into the same climatic divisions, each of which has its characteristic features.

Coastal Region.

The coastal region extends from 28° to 37° south latitude, and if the temperature accorded with that of similar latitudes in the northern hemisphere, Casino and Grafton would resemble the country bordering on the Gulf of Suez, in the Red Sea; Delhi, in India; Ningpo, in China, and New Orleans, in the United States. Such, however, is not the case. Casino has a mean temperature of 67°, only 1° more than that of Messina, in Sicily, which lies more than 9° further from the equator. Eden, which is situated at the extreme south of the Colony, in latitude 37°, has a mean temperature of 60°, which is practically the same as that of Nice and Rome, places respectively 460 and 330 miles further removed from the equator. Not only is the climate of the coastal region more mild in regard to average temperature than the corresponding latitudes in the northern hemisphere, but the range is not as great. This is a very important factor in estimating the healthiness of a country.

Temperature of Sydney.

As regards Sydney, situated as it is midway between the extreme points of the Colony, in latitude 33° 51′ south, the same truth is apparent. Its mean temperature is 62·9°, and corresponds with that of Barcelona, the great maritime city of Spain, and of Toulon in France, the former being in latitude 44° 22′, and the latter 43° 7′ N. At Sydney, the mean summer temperature is slightly under 71°, and that of winter 54°. The range is thus 17° Fahrenheit, while the mean yearly average for a period of 33 years was 62·9°. At Naples, where the mean temperature for the year is about the same as at Sydney, the summer temperature reaches a mean of 74·5°, and the mean of winter is 47·5°, with a range of 27°. Thus the summer is warmer, and the winter much colder, than at Sydney. The greatest temperature in the shade ever experienced in Sydney was 106·9°, the lowest winter was 36·8°, giving a range of 70°. At Naples the range has been as great as 81°, the winter minimum falling sometimes below the freezing point.

Climate of the Coast.

Taking the coast generally, the difference between the mean summer and mean winter temperature may be set down as averaging not more than 24°, a range so small that it will be rarely found elsewhere. The famed resorts on the Mediterranean seaboard bear no comparison with the Pacific slope of New South Wales, either for natural salubrity, or for the comparative mildness of the summer and winter, while the epidemics and pestilences which have devastated those regions of ancient civilization have never made their appearance on these shores.

Climate of table-land.

Passing from the coast to the table-land, a distinct climatic region is entered. On the high southern plateau, at an elevation of 4,640 feet, stands the town of Kiandra, having a mean summer temperature of 58°, and a winter temperature of 34·6°, corresponding with that of Dunfermline, in Scotland, in latitude 56° 5′ N., while Kiandra is in 35° 52′ S. Cooma, in the centre of the Monaro plains, at an elevation of 2,637 feet above sea-level, enjoys a summer as mild as either London or Paris, while its winters are far less severe. On the New England table-land, the climate of Armidale, and other towns, may be considered as nearly perfect as can be found. The yearly average temperature is scarcely 57° while the summer only reaches 69°, and the winter falls to 46°, a range of temperature approximating closely to the famous health resorts in the south of France.

Western Districts.

The climatic conditions of the western districts of the Colony are entirely different from those of the other two regions, and have been often cited as disagreeable. Compared with the equable temperature of the coastal district, or table-land, there may appear some justification for such reputation, but only by comparison. The climate of the great plains, in spite of the heat of part of the summer, is very healthy, and an inspection of the returns of death-rates, both of children and grown persons, given elsewhere, amply bears out this view. The town of Bourke may be taken as an example. Seated in the midst of the great plain of the interior, it illustrates peculiarly well the defects, as well as excellences, of the climate of the whole region. Bourke has exactly the same latitude as Cairo, yet its summer temperature is 5° and its mean 6·5° less than the Egyptian city. New Orleans also lies on the same parallel, but the American city is 4° hotter in summer. As regards winter temperature, Bourke leaves little to be desired. The mean winter reading of the thermometer is 54·5°, and accompanied as this is by clear skies and an absence of snow, the season is both refreshing and enjoyable. The great heat experienced on occasional days in summer, when the thermometer reads considerably over 100° in the shade, is not accompanied by that moisture in the air which at the sea-coast would make a less degree of heat almost unbearable.

Rainfall.

New South Wales falls naturally into three great meteorological divisions, viz., the coastal, embracing an area of 38,200 square miles; the table-lands, covering an area of 84,900 square miles; and the Western District, with an area of 187,600 square miles. The last named might, from its size and variable rainfall, be split into two districts with the 146° of east longitude as an arbitrary division. The coastal district has an average rainfall of 44·98 inches, varying from 64 inches at the Tweed Heads to 31·48 at the foot of the Dividing Range. In this district there are several stations close to the ocean which are subject to exceptional and varying rainfall. Of these may be mentioned Port Macquarie and the Clarence Heads, the first having a mean annual fall of 61·92, and the latter of 52·68 inches, while at Newcastle and Sydney the respective figures are 46·98 and 50·38 inches, and at Eden, almost the southern extremity of the colony, the average fall is only 35·01 inches. On the table-lands the rainfall averages 30·84 inches; there is, however, a small area at the southern portion of the table-lands where the high average of 64·80 inches is experienced. West of the table-lands the amount of the fall decreases as the distance from the Pacific increases, and declines from about 21·6 inches at the foot of the western slope of the Dividing Range to less than 12·5 inches in the Trans-Darling country. For the whole area of the Western division the average does not exceed 17 inches. The mean rainfall of the Colony for the last 33 years is about 25 inches, but this figure can hardly be taken as conveying any meaning, except perhaps that it shows the greater part of the Colony to be favored with only slight rainfall.

Average rainfall at principal stations.

The following table shows the average rainfall in some of the principal stations, which are arranged in geographical order commencing from the northern extremity, in each of the great divisions:—

Station.	Least distance from the Coast in miles.	Mean annual Rainfall in inches.	Station.	Least distance from the Coast in miles.	Mean annual Rainfall in inches.
Coastal District—Area, 38,200 square miles.					
Casino	28	41·30	Newcastle	1	46·98
Clarence Heads	0	52·68	Sydney	5	50·38
Grafton	22	36·12	Kiama	0	56·54
Port Macquarie	0	61·92	Moruya Heads	0	35·75
Kempsey West	12	50·71	Bega	8	29·17
Gloucester	32	54·85	Eden	0	35·01
Singleton	40	29·30			
Table-lands—Area, 84,900 square miles.					
Tenterfield	80	31·10	Young	140	26·83
Inverell	124	29·44	Queanbeyan	60	23·54
Tamworth West	116	26·43	Kiandra	88	64·80
Gulgong	132	27·02	Cooma	52	19·26
Orange	124	37·71	Bombala	37	22·29
Western District, East of 146° East Longitude—Area, 87,800 square miles.					
Walgett	286	19·20	Narrandera	211	18·58
Coonamble	237	21·72	Urana	213	17·90
Dubbo	182	21·69	Corowa	201	22·20
Condobolin	227	19·17			
Western Plains, West of 146° East Longitude—Area, 99,800 square miles.					
Hungerford	500	16·69	Broken Hill	555	14·34
Milparinka	599	9·32	Menindie	492	9·86
Bourke	386	16·15	Hillston	295	15·80
Louth	423	14·79	Wentworth	476	11·41
Wilcannia	473	12·62	Deniliquin	287	17·06
Cobar	345	12·05	Moama	290	17·22

Dryness of climate.

It is fortunate for the country that dryness is one of its characteristics; otherwise, instead of being the abode of health, the interior of the Colony would, with abundant rains, have become an impenetrable jungle, the lurking-place of those malarial fevers which devastate so many fair regions of the Old World and America. New South Wales may therefore be compared favourably with any part of the world; and, taking into consideration the comparatively low latitudes in which it is situated, it offers a most remarkable variety of temperate climates. From Kiandra, on the highest part of the great Dividing Range, to Bourke, on the great interior plain, the climate may be compared with that of the

Climate adapted to European race.

region of Europe extending from Edinburgh to Messina, but more generally resembling that of Southern France and Italy. It may therefore be regarded as peculiarly fitted for the habitation of people of European race, embracing, as it does, within its limits, the climatic conditions under which the most advanced races of the world have prospered. The following tables, showing the average meteorological conditions in certain places, fairly represent the whole Colony :—

Station.	Altitude.	Least distance from Coast.	South latitude.	Mean.				Actual.	
				Temperature.	Summer temperature.	Winter temperature.	Daily range of thermometer in shade.	Highest reading of thermometer in shade.	Lowest reading of thermometer in shade.
Coastal District.									
	feet.	miles	° ′	°	°	°	°	°	°
Lismore	52	13	28·50	69·2	78·0	59·5	21·2	108·2	30·0
Clarence Heads	120	0	29·28	69·3	76·7	59·4	15·6	96·8	42·5
Port Macquarie	49	0	31·25	63·8	72·1	54·0	16·9	94·6	31·8
Newcastle	180	1	32·55	64·1	71·9	54·9	12·5	100·3	31·8
Sydney	146	5	33·51	63·1	71·1	54·2	12·3	102·8	35·9
Wollongong	67	0	34·25	62·5	69·6	54·7	18·7	101·9	34·8
Cape St. George	175	0	35·12	61·6	69·4	55·4	13·8	99·0	35·5
Moruya Heads	50	0	35·53	61·6	67·5	54·2	18·5	104·6	31·1
Eden	107	0	37· 0	60·5	67·9	52·4	13·3	91·0	38·1
Table-land.									
Warialda	1,106	162	29·35	64·2	74·0	48·5	26·1	100·7	16·2
Inverell	1,953	124	29·48	60·5	74·2	46·9	19·3	97·1	20·4
Armidale	3,278	81	30·32	55·4	68·7	44·4	17·4	92·8	20·7
Coonabarabran	2,056	185	31·16	59·8	72·1	45·6	33·1	108·6	18·2
Bathurst	2,200	96	33·24	57·4	68·9	44·9	27·9	106·4	18·7
Mount Victoria	3,490	61	33·36	54·2	64·8	42·9	19·7	104·1	22·5
Goulburn	2,129	54	34·45	57·0	68·3	45·1	23·7	102·0	19·9
Kiandra	4,640	88	35·52	46·5	58·0	34·6	25·1	98·3	*2·4
Cooma	2,637	52	36·12	54·9	66·5	42·8	26·1	100·2	12·4
Western District.									
Bourke	347	386	30·30	69·9	83·7	54·5	28·2	120·8	28·0
Walgett	522	286	30·20	66·1	78·9	51·8	25·7	115·7	23·4
Cobar	780	345	31·32	69·6	84·1	55·0	28·2	118·7	29·0
Dubbo	865	182	32·18	62·8	74·2	49·5	28·8	111·4	18·6
Wagga Wagga	615	161	35·80	62·0	77·0	46·0	32·1	113·4	20·4
Hay	305	309	34·30	63·8	76·9	50·6	27·3	112·5	24·1
Deniliquin	320	287	35·32	63·2	75·5	51·0	33·5	118·7	22·0
Albury	572	175	36·60	61·2	74·2	48·7	24·4	107·8	28·5
Wentworth	144	476	34·80	64·5	77·7	51·8	25·2	115·7	29·1

* Below zero.

Average Meteorological Conditions of Sydney for each Month from 1859 to 1891.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Means and Extremes.
Average reading of standard barometer at 32° Fahrenheit and mean sea-level at 9 a.m.	29·958	29·988	30·085	30·147	30·123	30·115	30·150	30·128	30·077	30·022	29·980	29·936	30·059
Average hourly reading of self-registering electric barograph, corrected to 32° Fahrenheit, and mean sea level................	29·934	29·965	30·057	30·116	30·098	30·082	30·120	30·107	30·052	29·996	29·974	29·911	30·034
Mean temperature (in shade)......	71·5	70·9	69·3	64·8	58·5	54·5	52·5	55·0	58·7	63·3	66·4	69·8	62·9
Average reading of maximum thermometer (in shade)	78·2	77·1	75·5	71·0	65·0	60·7	59·1	62·6	66·2	70·9	73·8	77·1	69·8
Average reading of minimum thermometer (in shade)	64·8	61·6	63·0	58·3	52·0	46·7	45·7	47·5	51·2	55·7	59·2	62·5	55·7
Mean temperature of sea water	71·1	71·5	70·8	68·5	64·6	60·4	57·5	57·6	60·3	63·2	66·5	69·3	65·1
Greatest monthly rainfall, inches..	10·489	18·556	18·700	24·490	20·868	16·296	11·952	10·166	14·045	8·645	9·880	7·804	24·490
Least monthly rainfall, inches	0·419	0·401	0·410	0·060	0·214	0·541	0·120	0·040	0·083	0·210	0·200	0·453	0·040
Average monthly rainfall, inches ..	3·573	5·597	4·890	6·079	5·489	5·644	4·477	2·937	3·105	2·871	3·227	2·487	Total 50·385
Average number of days' rain	14	14	14	13	16	12	12	11	12	12	13	13	„ 156
Average monthly evaporation	4·786	3·710	3·214	2·435	1·805	1·431	1·573	1·913	2·531	3·435	4·019	5·003	„ 35·855

PART V.

Geological Formation.

Classification of rocks.

'HE geology of the Colony has been ably treated by various learned scientists, and this work has been added to by the Mr. C. S. Wilkinson, Government Geologist, and by his essor in that office. To the Rev. W. B. Clarke we are bted for the first systematic classification of the various mentary formations found in New South Wales. These were ified by him as follows :—

Palæozoic :	Silurian	
	Devonian	
	Carboniferous	
	Permian.	
Mesozoic :	Triassic	
	Jurassic	
	Cretaceous.	
Cainozoic :	Tertiary	Miocene
		Pliocene
	Post Tertiary	Post Pliocene
		Recent.

Palæozoic formation.

'alæozoic.—This formation extends throughout almost the whole ern portion of the Colony, the rocks of the upper Silurian age

principally occurring on the western watershed of the main Dividing Range, in the country where the Murrumbidgee, Lachlan, and Abercrombie Rivers rise. They appear on the eastern watershed, along part of the coast near Bateman's Bay, and, striking inland, are found in the basin of the Clyde, and the upper valley of the Shoalhaven.

Silurian formation.

The upper Silurian rocks extend as far north as Mudgee, where they are overlaid by the Carboniferous strata of the Hunter Valley, and by the belt of volcanic rocks extending along the Liverpool Range. They reappear further north, in the upper valley of the Macleay River, on the east slope, and in the basin of the Namoi, on the west of the Dividing Range. The Silurian rocks consist of sandstone, slate, and limestone, and exhibit evidence of metamorphism, particularly in the country around Bathurst and Hill End.

Limestone.

Celebrated Caves.

Limestone beds, of considerable extent, are scattered throughout this formation. These are chiefly composed of crinoids and corals which outcrop prominently in the Wellington District, near Molong and Gulgong, at Tuena, and also in the Murrumbidgee District. In the limestone formations are found magnificent caves, such as the Wellington, Wombeyan, Fish River or Jenolan Caves, Bungonia and Abercrombie, the fame of which has spread even beyond the confines of Australia. The caves at Yarrangobilly, in the Kiandra district, are also said to be very attractive. Rocks of the Devonian age also exist near Rydal, where Mr. C. S. Wilkinson measured a section of strata, showing a thickness of not less than 10,000 feet.

Carboniferous Deposits.

The coal-bearing rocks are of three distinct systems, the first of which belongs in all probability to the lower carboniferous age. Two seams, the one 5 feet and the other 7 feet in thickness, occur near the top of this system, but the coal in both cases is full of bands, and otherwise too dirty to be of any economic value. The second system, known as the permo-carboniferous, contains many

The coal measures.

The Clarence coal measures

seams of workable coal, which have been developed in both New South Wales and Queensland. Productive coal measures occur in this system in three horizons in New South Wales: The first and lowest of these is the Greta (Stony Creek) series, the second the Tomago (East Maitland) series, and the last and uppermost the Newcastle series. The total thickness of this system and its associated strata at Newcastle is about 11,000 feet, containing a total thickness of about 150 feet of coal, without taking into account seams of less than 3 feet in thickness. Recent borings at Cremorne, a point on the northern margin of Sydney Harbour, as well as at Holt-Sutherland and Liverpool, confirm the anticipations of Mr. C. S. Wilkinson as to the continuous extension of at least the upper or Newcastle series of coal-seams between Newcastle on the north and Bulli on the south. The third system comprises the Clarence carboniferous basin, and is of mesozoic age. Professor David estimates the length of that part of it which contains the principal seams to be about 65 miles from east to west, while its width is about 37 miles from north to south. The most remarkable beds in the Clarence basin are a series of massive whitish sandstones, which were considered by Mr. C. S. Wilkinson to be the equivalents of the Hawkesbury sandstones, and were named by him "The Middle Clarence Series," occupying as they do an intermediate position between the upper and lower coal-beds of the basin. None of the seams in this coal-field have as yet been proved to be of commercial value. Professor David estimates the top seam to contain 1 foot 9 inches, out of a total thickness of 5 feet 7½ inches, of coal fit for ordinary consumption, while the second and third seams have not yet been sufficiently tested to allow of a definite opinion being formed of their value. It is probable, however, that even if the seams prove to be of insufficient thickness and purity to yield coal fit for purposes of export, they may supply sufficient coal of fair quality for local requirements, especially if the coal be washed in suitable washing machines, such as Lührig's.

Mesozoic formation.

The Hawkesbury and Wianamatta series, which overlay the carboniferous formation of that part of the country through which the Hawkesbury and its principal tributaries flow belong to the mesozoic period. It is in this formation that the wonderful gorges of the Blue Mountains, and the beautiful harbours of Port Jackson, Port Hacking, and Broken Bay occur. The rocks are of warm yellow sandstone, and the thickness of the strata is estimated at about 1,000 feet.

The Wianamatta series.

The Wianamatta series extend round Sydney and cover a space in the shape of an irregular triangle, the angular points of which rest at Picton on the south, Richmond on the north, and Sydney on the east. The beds are composed of fine sedimentary deposits of argillaceous shales, and are of comparatively little thickness. They appear to have been deposited in hollows worn by denudation out of the sandstone, on which they directly rest. Neither the Hawkesbury sandstones nor the Wianamatta shales contain any remarkable seams of coal. Both formations are intersected by dykes of dolerite, which have also intruded the underlying carboniferous formations, and where they have come in contact with the coal-seams, the latter have been converted into coke, sometimes to a thickness of 3 feet or more.

Cretaceous formations.

The Cretaceous formations occupy the north-western part of the Colony, extending from the Darling westward, towards the north-west corner. Water-bearing strata have been reached at depths varying from 89 feet to 2,070 feet, and large quantities of water have been obtained. The existence of subterranean water throughout this extensive region has been practically demonstrated, and it remains for the settlers to avail themselves of the stores with which nature has charged her reservoirs in the ages that have long since been counted out. The steps already taken in regard to utilising the artesian water are described in another part of this chapter.

Cainozoic formation.

Cainozoic.—To this formation belongs the greater portion of the central and western districts of the Colony. It therefore embraces the valleys of the great western rivers, and their chief tributaries. The formation is, however, intersected by a broad belt, chiefly of Silurian rocks, extending across its centre, from the Bogan River towards the Great Barrier Range, on the further side of the Darling. Large patches of Devonian formation are also met with in the same region. Making these deductions, the tertiary formation covers more than one third of the whole Colony. The vast alluvial plains were formed during the Pliocene and Post Pliocene periods. The alluvial deposits are of variable thickness, sometimes shallow, but in the great plains, between the main rivers which intersect the country, the deposits are of very great depth.

IGNEOUS AND METAMORPHIC FORMATION.

Granite formation.

The area occupied by this formation comprises one-eighth of the Colony—the principal rocks belonging to the series consisting of varieties of granite, porphyry, diorite, and serpentine. The granite formation occurs for the most part in the northern and southern masses of the great dividing chains, but is found out-cropping throughout the Silurian deposits, which cover so large a part of the centre of the Colony. Diorite and basalt occur principally in the country between the Macleay and Manning Rivers, and on both slopes of the Liverpool Range, between the upper waters of the Namoi and Macleay, and divide the upper Silurian and Carboniferous deposits of the eastern and western watersheds. Serpentine is found scattered in different parts of the Colony, chiefly at Gundagai, Bingera, Lucknow, and Port Macquarie. The granites, porphyries, and diorite rocks have been recognised as belonging to the Palæozoic age, whilst the volcanic rocks, basalts and others, are contemporaneous with the tertiary series.

ARTESIAN WATER.

Artesian wells

It had long been scientifically demonstrated that there was every probability of water being obtained by boring in the cretaceous formations which occupy the north-west region of the Colony, although the region is favoured with only a sparse rainfall, but it was not until 1879 that artesian boring was attempted. In that year operations were begun at Killara, a station lying between Bourke and Wilcannia. The supply was tapped at a depth of 140 feet, and the effluent water rose to a height of 26 feet. In 1884 the Department of Mines put down its first bore in search of water, a small supply of which was reached at 89 feet. Since then much work has been done, and at the close of 1891 seven bores were down to the water-bearing strata, and eleven were under way. Gauged by the quantity of water yielded, the most successful bore yet put down by the Government is the "Native Dog," in the county of Gunderbooka, about midway between Bourke and Barringun; water was reached in this bore at 471 feet, and the daily yield is 2,000,000 gallons with a temperature of 92°, the cost of the bore being £1,000.

At Youngerina, between Bourke and Hungerford, water was found at 165 feet, and a flow of 175,000 gallons was obtained. The other bores put down by the Government of the Colony have been successful in five cases, the yields varying from 22,464 gallons to 100,000 gallons per day, but in six other bores no water was found, or found in such small quantities as to be but a poor recompense for the labour expended. At the close of 1891 contracts for 37 additional bores were let, the sites chosen being specially selected; of these 16 are in the tertiary formation in the south-western district of the Colony, two are in the north part of the central division, in the basins of the Castlereagh and Lower Macquarie, the remainder being chiefly in the cretaceous country of the west of the Darling.

the boring operations carried on by the State, there some 50 other bores put down by private persons, and 9 may be said to be successful. The 16 most notable re as follows:—

Private boring operations.

Station.	County.	Depth in Feet.	Artesian Supply in gallons per diem.
No. 2	Barrona	1,340	1,750,000
gle, No. 2	Culgoa	1,590	1,728,000
	Irrara	1,300	1,000,000
No. 3	Barrona	1,227	700,000
1	Culgoa	1,693	600,000
3	Landsborough	860	600,000
2	do	940	576,000
4	do	750	500,000
7 (Nefeenyah Bore)	Killara	540	500,000
No. 2	Yantara	203	480,000
No. 1	Barrona	1,073	350,000
a	do	1,600	224,000
No. 1	do	916	140,000
8 (Paradise Bore)	Killara	931	60,000
o. 10 (Gum Lake Bore)	do	676	50,000
gle, No. 1	Culgoa	2,005	28,000

the foregoing there were some 13 others, giving a daily under 15,000 gallons.

proximate cost of the wells, both private and public unk, may be set down at £91,000, and the supply at 11,724,000 gallons per diem, and this expenditure, from whatever point of view the matter be looked at, t be regarded as a splendid investment.

Cost of wells

PART VI.

Mines and Minerals.

THE progress of the Colony during the first sixty years of its history, viewed in the light of later events, seems painfully slow, and somewhat uncertain. Yet the earlier colonists must have been conscious of the vast heritage destined to become the fortune of Australia, for on no other supposition can their sacrifices and exertions be understood. To the nations of the old world this was practically an unknown land, and it was not till the story of the gold discoveries was noised abroad that the importance and possible future of Australia were in any way realised.

Gold-mining.

Immigration due to gold discovery.

Gold-mining was but for a brief period the leading industry of these colonies, even in the wonderful years which succeeded the memorable discovery of Hargraves. Now, amongst the minerals obtained in New South Wales, it yields in importance to coal and silver; whilst compared with that of pastoral and agricultural produce the value of gold procured is inconsiderable. The discovery of gold, nevertheless, made Australia a nation, for the current of immigration which set southward on the presence of the precious metal becoming known has never ceased. Thousands of men in the prime of life, attracted to these shores by the hope of fortune easily acquired on the fields of the Turon and Bendigo, seeing patient industry everywhere rewarded, remained to share the general prosperity, and those who came to dig for gold readily turned their attention to their former, but less exciting, pursuits.

New South Wales less affected by gold discovery than Victoria.

Modern system of gold-mining.

The settlement of New South Wales has not been affected by the gold discovery to the same extent as that of Victoria, yet the number of persons engaged in actual search for the precious metal was at one time considerable. This number has gradually decreased, as the fields have been despoiled of the treasures contained in their easily worked alluvial deposits. The abandonment of a gold-field is not, however, always a loss to the country. After the excitement has died out, the digger makes room for the agriculturist, and resources of a more permanent character are developed, in parts of the Colony, which, but for the prospector, would have been unknown, and, but for the farmer, would have remained a wilderness. Gold-mining now requires the expenditure of capital for the erection of plant and gold-saving machinery; and the miner, whose stock-in-trade of gold-digging appliances consisted solely of a pick, a shovel, and a tin-dish, has had, in the great majority of instances, to seek other fields of labour. Still the mining industry of New South Wales is in a very flourishing condition, and maintains in employment a fair proportion of the people of the Colony. Many of the gold-miners have turned their attention to the silver, copper, and tin mines, and the coal and shale mines find occupation for large numbers.

Progress of the mining industry.

Mining is carried on both on private property by the owners, and on lands leased from the State; most of the principal coal-mines belong to the former category, while the leading mines for other minerals are on lands leased under the various sections of the Land Act. The area of freehold land devoted to mining purposes is not known; the area of State lands held under the terms of the Act just referred to was, at the close of 1891, 348,325 acres; of this 147,682 acres were within reserves and, 141,945 outside reserves, the remaining area of 58,698 acres being held under application for lease. The number of permits to search and dig for gold was 492, and of these 162 were granted during 1891. The revenue from mineral leases and licenses was £54,652, and the royalty on reserved minerals £4,910.

Number of persons engaged in mining.

The following table gives the approximate number of persons actually engaged in the principal departments of mining during each of the past seven years :—

Minerals.	Miners employed at end of each year.						
	1885.	1886.	1887.	1888.	1889.	1890.	1891.
Gold	5,911	6,767	6,060	8,278	10,192	12,589	11,166
Silver and silver lead........	929	1,297	1,670	2,986	6,587	5,806	7,645
Copper	1,000	622	503	1,214	542	716	481
Tin	3,395	2,814	3,188	3,490	1,234	2,172	1,951
Coal	7,097	7,847	7,998	9,301	10,277	10,469	10,529
Shale	324	100	120	253	138	189	200
Total	18,656	19,447	19,539	25,531	28,970	31,941	32,323

The figures in respect to the number of men engaged in mining are given on the authority of the returns to the Mines Department, but are probably overstated, for as will presently appear the value of gold won on the assumption that the number stated is correct would only amount to £50 per man.

Value of mining machinery.

The value of mining machinery, exclusive of that used for coal and shale mining, may be set down at £1,247,000; of this £564,900 represents the machinery employed at the silver-fields, £574,400 that on the gold-fields, and £107,700 that on other mineral fields, principally copper and tin.

Quantity and value of mineral products of the Colony.

The summary hereunder shows the value of the products of the various minerals since their first discovery, as well as the value of minerals won in the year 1891.

Mineral Production during and to end of 1891.

Minerals.	Value.	
	During 1891.	To end of year 1891.
	£	£
Gold	558,306	38,633,488
Silver and silver lead	3,619,589	11,302,095
Coal	1,742,796	25,809,041
Shale	78,160	1,416,712
Coke	34,473	75,620
Tin	133,963	5,675,663
Copper	119,195	3,481,923
Antimony	22,057	115,798
Bismuth	500	36,642
Lead (pig)	2,025	10,323
Oxide of iron	434	2,647
Sundry minerals*	84,063	200,816
Total Value	6,395,561	86,760,768

*24,000 carats of emeralds were won at Emmaville during 1891, but the value is not known.

Total production of minerals.

It will be seen from the foregoing table that the Colony has produced various minerals of the total value of nearly eighty-seven millions sterling. The figures given for each mineral in the preceding table agree with those shown in the 1891 annual report of the Mines Department, except those relating to tin and copper. The ores of these metals are imported in large quantities to be smelted, and the refined copper and tin, the production of this smelting, are usually exported as domestic produce, and have appeared as such in the mining returns, which of course is an error.

PROSPECTING VOTE.

Encouragement of prospecting.

Following the practice of the neighbouring colony of Victoria, the Government has for some years past devoted a sum annually to encourage prospecting for gold, and in 1889 the conditions of the vote were so amended as to embrace all minerals. The amount set apart for the year 1891 was £20,000; for the year 1892 the amount was raised to £40,000. Miners desiring a grant from the vote have to satisfy the prospecting board that the locality proposed to be prospected is one likely to yield the mineral sought for, and that the mode of operations is suitable for its discovery. Aid is given in deserving cases up to 50 per cent. of the value of the work done and of the necessary implements and materials. Miners who have been assisted from the vote are not entitled to claim any reward that may be offered for the discovery of any new gold or mineral fields.

DIAMOND DRILLS.

Use of diamond drills.

The use of the diamond drill in searching for minerals dates only from 1881, but boring by the Department of Mines commenced much later. The drills now in use belong for the most part to the State, and are lent to private persons on terms fixed by regulation, the charges being £2 2s. on application, towards cost of inspection; £10 per week for cost of diamonds and wear and tear of machinery from start of bore till completion; wages of engineer and assistants; cost of tubes damaged, destroyed, or that cannot be withdrawn from bores; all charges for freight, &c., on machinery both on being sent and returned, and cost of all fuel and water necessary for working the drill. An abatement is however granted by the Mines Department in special cases.

Depth bored.

During the year 1891 the depth bored was 7,798 feet, and the charge therefor was £7,268, while the expense to the Mines Department was only £5,826; in this last sum is not included the wear and tear of the drills and machinery employed. The following statement shows the total depth bored during the year 1891, together with the average sinking per hour and the cost per foot. The mineral sought for in each case except the first was coal:—

Diamond Drill Work, 1891 :—

Locality.	Strata.	Total depth bored to end of 1891.		Rate bored per hour.	Cost per foot.			Mineral for which bored.
		ft.	in.	inches.	£	s.	d.	
Gulgong ...	Basalt	893	2	8·53	0	14	$10\frac{7}{8}$	Gold.
Nowra	Coal measures	1,423	4	10·35	0	8	$0\frac{11}{16}$	Coal.
Waratah...	,, ...	1,127	6	16·58	0	6	$5\frac{1}{2}$	,,
Cessnock ..	,, ...	1,220	0	10·83	0	9	$1\frac{7}{16}$	,,
Nobby's ..	,, ...	343	7	18·41	0	10	7	,,
Greta	,, ...	1,207	7	15·48	0	6	$1\frac{1}{2}$	,,
Anna Bay.	Sandstone, basalt, and serpentine.	1,213	1	14·44	0	9	$1\frac{3}{8}$	,,
Cremorne..	Coal measures	2,942	2	21·66	1	8	$2\frac{1}{2}$	,,
Wyee	,, ...	946	8	8·88	0	14	$3\frac{3}{16}$	,,
Balli	Basalt and coal measures	793	1	11·66	0	9	$1\frac{1}{4}$	,,
	Total............ ...	12,110	2	13·59	0	12	$7\frac{1}{16}$	

METALLIC MINERALS.

Gold.—Amongst the metallic minerals found in the Colony, gold occupies a foremost place, both on account of the quantity which has been, and is now being, raised, and of the influence which its discovery has had on the settlement of the country. The date of the discovery of gold in New South Wales was for a long time the theme of much controversy, and the question as to the original discoverer, long disputed. It is now agreed, however, that the existence of gold was known to the authorities during the early days, when the Colony was a convict settlement, but for obvious State reasons the matter remained secret. The first authentic record of the discovery of gold is contained in an extract from Assistant Surveyor James McBrian's Field-book, bearing date 16th February, 1823, in which the following note appears :—"At 8 chains 50 links to river, and marked gum-tree—at this place I found numerous particles of gold in the sand and in the hills convenient to the river." The river referred to is the Fish River, at about 15 miles from Bathurst, not far from the spot to which the first gold-rush was made twenty-eight years afterwards.

Gold.

First mention of gold.

First discoveries of gold.

In 1839, Count Strzlecki found gold in the Vale of Clwydd, and communicated the discovery to Governor Gipps, but he was requested to keep the matter secret, lest the knowledge of the existence of gold should imperil the safety and discipline of the settlement. The Rev. W. B. Clarke also found gold in 1841 in the Macquarie Valley and the Vale of Clwydd, and expressed his belief that the precious metal would be found abundantly dispersed throughout the territory.

Actual discovery of payable gold.

But it was not until the year 1851 that payable deposits were proved to exist in New South Wales, and this important discovery was due to Mr. E. Hammond Hargraves, who, on his return some time previously from California, pointed out to the Government the localities in which he had found payable deposits of alluvial gold, viz., at Lewis Ponds and Summer Hill Creek, in the districts of Bathurst and Wellington. Prospecting operations followed in the neighbourhood, with the result of which every one is now familiar. A few weeks later rich deposits were discovered at Ballarat, Mount Alexander, and other gold-fields, in Victoria; and the world witnessed a gold rush from all parts of the earth to these colonies, similar to that which some years before had taken place to California. The probable effects of the movement were not clearly seen at the time, either here or in the United Kingdom, but the result has been the creation of states, whose future is surrounded with the brightest promise.

Alluvial gold.

Native gold is the only true mineral species of gold which has, so far, been found in New South Wales, and was first met with in easily worked alluvial deposits. Alluvial diggings have always attracted the greater number of miners, as the precious metal is dug out without costly appliances. But, however rich they may be, these deposits are very soon worked out, for their area is generally of limited extent. In the alluvial deposits gold is found associated with a variety of minerals; it occurs in the shape of grains and nuggets, water-worn in appearance, and some of considerable size. Though New South Wales has not yielded nuggets of so extraordinary a size as those found in the neighbouring Colony of Victoria, some very splendid specimens of that gold formation have, nevertheless, been unearthed at various times.

Remarkable nuggets and their value.

Thus, in July, 1851, a mass of gold was found on the Turon River gold-fields which weighed 106 lb., or 1,272 oz. In November, 1858, at Burrandong, near Orange, another nugget was found which, when melted at the Sydney Mint, gave 1,182 oz. 6 dwt. of pure gold, of the value of £4,389 8s. 10d. A third nugget, called the Brennan, was sold in Sydney in 1851 for £1,156. In 1880 and 1882, several nuggets which were unearthed at Temora weighed from 59 to 139 oz., and in 1887 nuggets were found by fossickers in various parts of the country, four of which, weighing respectively 357 oz., 200 oz., 47 oz., and 32 oz., were obtained at Hargraves; and another, weighing 30 oz., at Limestone Creek. The Jubilee nugget, weighing 344 oz., was also discovered in that year at Maitland Bar, in the Mudgee District, and was worth about £1,236.

Further discoveries probable.

Although the alluvial deposits discovered in the early days have been practically abandoned, and are considered as worked out, there is ample evidence that the surface of the country has been merely scratched. The search for gold has been vigorously prosecuted for more than forty years; but new gold-fields and fresh deposits are nevertheless being continually discovered in localities supposed to have been thoroughly examined. The gold formation is very widely diffused throughout the Colony, as may be gathered from the fact that the gold-fields of Albert, Delegate, and Ballina are between 600 and 700 miles distant from each other; and it has been estimated that the extent of country covered by formations in association with which gold always occurs, exceeds 70,000 square miles, whilst the precious metal has also been found in formations where its presence was never suspected. A considerable portion of this area, equal to nearly one-fourth of the whole surface of the Colony, has never been touched by the pick of the miner.

Want of appliances in early days.

It is well-known to the mining public that many mines which gave promise of handsome results were abandoned in the early days, simply because the appliances at hand were not sufficiently powerful or well directed to save the gold contained in the foreign matter with which it was found associated. At Wattle Flat, on the Turon River, and at many places on the older gold-fields, gold was found in deposits of iron pyrites, which have since proved to be in a very high degree payable; but these claims, when apparently exhausted, were abandoned some years ago, the miners lacking the necessary knowledge or skill to obtain from the pyrites the whole of the gold they contained. Improved methods of extraction have since been invented and a rich harvest awaits the skilled miner who shall bring to bear upon the development of this industry, modern knowledge, and appliances such as are being successfully employed in other countries.

Formation in which gold occurs.

Gold is also found in quartz-veins, occurring in older and metamorphic rocks, such as argillaceous slates, chloritic, and talcose schists, as well as granite, diorite, serpentine, and porphyry. Vein gold is associated more commonly with iron pyrites, though found with copper, lead, zinc, and silver ores, and occurring also in asbestos. But the extraction of gold from quartz-veins requires the erection of extensive machinery and gold-saving appliances, involving an outlay of capital such as the ordinary miner seldom possesses. Quartz-mining is generally carried on by companies.

Gold in coal measures.

Gold has been found in the Coal Measures, and Carboniferous strata. The Rev. W. B. Clarke detected it in the Hawkesbury sandstone formation, on the north side of Sydney Harbour, and he also mentions that it is distributed through the sand at the mouth of the Richmond River. Along the southern part of the coast of New South Wales gold has been found near the shore in the sand washed by the waves of the Pacific Ocean, whilst at Bermagui, and in the district extending between Moruya and Eden, important discoveries of the precious metal have also been made. It would be impossible to name every part of the colony in which gold is found, as it appears throughout the greater part of the territory, and there is ample evidence that deposits exist which will offer to the prospector or the miner a profitable field of employment for many years to come.

Weight and value of gold coined and exported.

The following table shows the quantity and value of the gold received for coinage at the Mint, and exported during each year since 1851 :—

Year.	Weight.	Value.	Year.	Weight.	Value.
	oz.	£		oz.	£
1851	144,121	468,336	1873	360,850	1,389,705
1852	818,752	2,660,946	1874	270,710	1,038,844
1853	548,053	1,781,172	1875	229·386	881,480
1854	237,911	773,209	1876	155,166	581,689
1855	170,146	613,148	1877	122,629	463,130
1856	183,946	666,155	1878	117,978	423,184
1857	161,043	616,712	1879	107,640	399,187
1858	280,558	1,082,865	1880	116,751	434,641
1859	323,984	1,237,662	1881	145,532	550,111
1860	381,614	1,445,158	1882	129,233	491,594
1861	459,879	1,771,855	1883	122,257	452,611
1862	616,910	2,360,383	1884	105,933	390,229
1863	467,399	1,791,534	1885	100,667	366,388
1864	341,954	1,304,735	1886	98,446	355,600
1865	364,541	1,390,803	1887	108,102	386,771
1866	287,534	1,103,246	1888	85,296	308,821
1867	269,407	1,043,458	1889	118,948	431,138
1868	258,773	1,003,002	1890	127,289	458,453
1869	252,130	967,625	1891	151,226	550,606
1870	240,402	916,409			
1871	321,469	1,232,011	Total	10,328,665	38,219,327
1872	424,100	1,634,821			

The total value of gold shown in the above table is obtained from returns furnished by the Mint, and only includes the gold received for coinage and that which is exported without passing through the Mint, whereas the amount given in page 73 is the total value and quantity raised to the end of 1891 according to the Mines Department.

Decline in gold production.

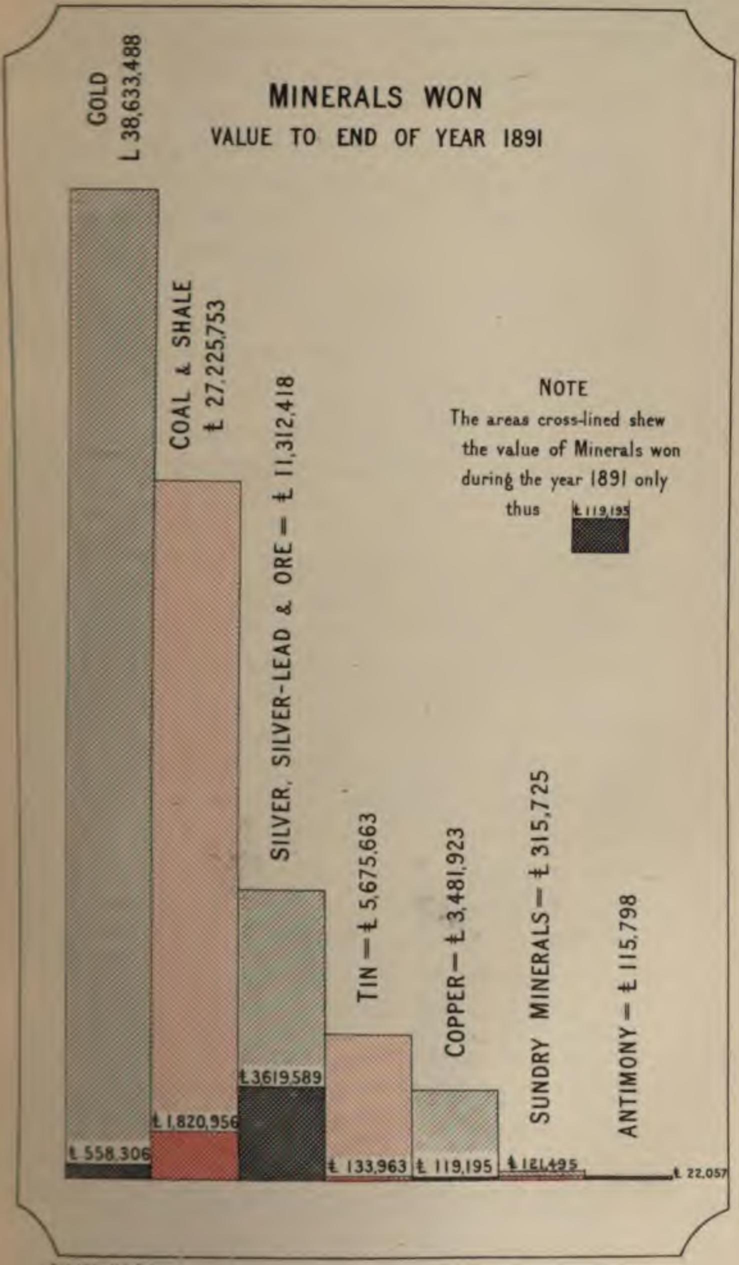
This table shows that the production of gold in New South Wales has, since the year 1872, considerably decreased. This decrease is explained by the fact that the rich alluvial deposits discovered in the early days have been exhausted, and that other resources of a more permanent nature are being developed. The latter offer steadier employment to the labouring classes, without, it is true, the chance of accumulating rapid fortunes, but with more security against loss.

Alluvial gold-mining.

The principal seats of alluvial gold-mining are the Bathurst and Mudgee districts, and the country watered by the various feeders of the Upper Lachlan, and also in the Tumut and Adelong and Braidwood districts. In 1880, the Temora gold-fields, in the Murrumbidgee district, about 30 to 40 miles from the inland town of Wagga Wagga, were discovered, and were for some years in a flourishing condition. The district is now drifting from mining into an important agricultural settlement. In the north of the Colony, in the New England district; on the coast, in the county of Gloucester; and in the extreme north-west, at Mount Poole, Mount Browne, and Tibooburra, the gold-fields sustain a considerable population of miners. The system of hydraulic sluicing is adopted in only two or three mines in the New England district; at Kiandra, on the southern tablelands, where extensive reservoirs have been formed, and the face of the rocks attacked in various places; and in the Shoalhaven valley, where large sums have been expended by companies in endeavouring to bring water to bear for sluicing several promising beds of alluvium.

Quartz-mining

The principal quartz-veins are situated near Bathurst, Armidale, Hill End, and Mudgee; the two last-mentioned gold districts had, up to the end of 1891, already yielded 1,142,331 oz., or over 32 tons of gold, valued at £4,432,368. The Geological Surveyor, who examined this field in 1886, reported that its resources were



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far from being exhausted. At Adelong, Tumut, Temora, Parkes, Jindera, and near Gundagai, reefs are also profitably worked, as well as in the south-east of the Colony. A promising gold-field was opened up at Peak Hill, about 45 miles from Dubbo, towards the end of 1889, and another at Pambula, near Twofold Bay, during 1890. In the latter district 1,600 oz. of gold were obtained from 1,100 tons of ore in 1891.

Revival of quartz mining in 1887 and 1888.

Much enterprise has been shown during the last few years in the search for gold; and quartz-reefs have been opened up in many parts with profitable results. Old workings, which had been abandoned years ago under a prevailing idea that they were valuable only on the surface, and which had scarcely, in any instance, been tested to a greater depth than 200 feet, have been reopened with very encouraging results.

Decline of alluvial mining.

An important feature of the gold-mining industry of late years is that the number of persons employed in alluvial mining and the revenue derived from this source, have diminished considerably, whilst quartz-mining is more and more becoming a permanent industry, the returns from that source during 1891 being nearly double that of the preceding year, and much in advance of any year shown in the subsequent table. The number of persons engaged in alluvial and quartz mining, and the production during the last five years, were as follows:—

Year.	Number of Miners.		Production.	
	Alluvial.	Quartz.	Alluvial.	Quartz.
	No.	No.	oz.	oz.
1887	3,434	2,626	36,290	50,911
1888	4,368	3,910	36,796	36,539
1889	5,623	4,569	37,170	75,777
1890	6,304	6,285	58,830	58,832
1891	4,748	6,418	49,625	113,710

Composition, colour, and specific gravity.

The gold found in New South Wales is never absolutely pure, always containing traces of other metals, such as copper, iron, and bismuth, and often a fair percentage of silver. To the presence of the latter its light-yellow colour is due. New South Wales gold is generally lighter in colour than Victorian gold, but of a deeper yellow than that found in the fields of Southern Queensland; its specific gravity averages about 17·5.

Authority to dig.

The authority to dig for gold costs only 10s. a year, and entitles its possessor not only to take up ground for mining, but also to occupy, in a mining township, a ¼ acre, or, outside a town, 1 acre of land for a business site.

Extent of mining enterprise.

Of the 2,210 applications made during 1891 to lease Crown lands for mining purposes, 1,021 were for auriferous land, embracing an area of 7,471 acres. The steam-engines employed in quartz-mining numbered 192, with an aggregate of 3,198 horse-power. There were also 137 crushing-machines, and 1,322 stamp-heads. In alluvial gold and tin mining there were employed 32 steam-engines, of which the aggregate horse-power equalled 456. The value of the machinery employed in gold-mining is estimated at £574,416. During the year 1891 the number of persons more or less regularly employed, in various parts of the Colony, in gold-mining was 11,166, of whom 10,458 were Europeans and 708 Chinese. There were 6,418 persons engaged in quartz-mining, and 4,748 in the alluvial diggings.

Gold sent to Sydney Mint.

The quantity of gold, the produce of New South Wales, received at the Sydney Mint for coinage during 1891 amounted to 142,470 oz., of the gross value of £518,249, the average price being £3 12s. 10d. per ounce.

Coinage of gold in Sydney.

The figures for 1891 show an increase of 22,906 oz. when compared with those of the previous year, which is very satisfactory on the whole. It must always be borne in mind that the results of quartz-mining are, in few cases, immediately seen. Much patient labour and the expenditure of a large amount of capital must take place before payable gold is obtained, and the leases taken up two years ago are only now beginning to show a return for the time, labour, and money which have been bestowed upon them. The average weight of gold obtained by each miner in 1891 was 13·73 oz., valued at £50. It must not be supposed, however, that these men were employed during the whole year for so small a wage. Many of the miners follow other pursuits during a portion of the year; besides which, there were several new fields, from which as yet very little returns have been made, and a large number of men were engaged in prospecting.

Yield from quartz.

The following table shows the average yield of gold obtained from certain parcels of quartz crushed in several of the mining districts during 1891 :—

District.	Quantity.	Average per ton			Yield of Gold.		
	Tons.	oz.	dwt.	gr.	oz.	dwt.	gr.
Bathurst	8,428	0	6	18	2,855	6	11
Tambaroora and Turon	2,502	0	10	9	1,298	5	0
Lachlan	3,768	0	18	15	3,579	0	0
Southern	1,731	0	17	16	1,538	0	18
Adelong and Tumut	12,321	0	8	12	5,253	12	14
Peel and Uralla	13,810	1	6	2	18,150	14	0
Hunter and Macleay	415	1	1	13	447	4	0
Clarence and Richmond	282	1	7	17	380	13	9
Mudgee	2,522	0	13	12	1,704	2	9
Cobar	1,023	0	13	19	704	10	0
	46,802	0	15	8	35,911	8	13

Yield of alluvium.

Owing to the reluctance shown by miners to disclose the result of their labours, it has been found possible to obtain a return of the treatment of alluvium in 1891 from only three mining districts—the Lachlan, Mudgee, and Southern. The yield, though good, is not so high as the average for previous years, though there is nothing to show whether the figures here given indicate the general average of the Colony or not. The statement embraces such a very small proportion of the total quantity treated, as to be of comparatively little value for statistical purposes, and is only given because fuller details are wanting :—

District.	Quantity.	Average per ton.	Yield of Gold.
	Tons.	oz. dwt. gr.	oz. dwt. gr.
Lachlan	18,066	0 12 16	11,465 0 0
Mudgee	6,570	0 8 17	2,860 0 0
Southern	7,075	0 1 17	613 0 0
	31,711	0 9 10	14,938 0 0

Accidents in gold mines.

The number of fatal accidents in gold-mines during 1891 was seven—the same as in the previous year. Three men lost their lives in auriferous quartz-mining, four in alluvial workings, and fourteen were injured in quartz-mines.

Total production of gold in Australasia.

From the date of the first discovery of payable gold, in 1851, to the end of the year 1891, the quantity of gold produced in the Australasian colonies represents a total value of £348,316,848, extracted in the short space of forty years. The share of each colony in the production of this wealth is given hereunder :—

Production of Gold in Australasia to end of 1891.

Colony.	Value.	Proportion raised in each Colony.
	£	per cent.
New South Wales	38,633,488	11·09
Victoria	229,787,896	65·97
Queensland	28,052,199	8·05
South Australia	1,267,917	0·36
Western Australia	720,717	0·21
Tasmania	2,421,567	0·70
New Zealand	47,433,074	13·62
Australasia	348,316,858	100·00

By far the largest proportion of this amount was produced by the Colony of Victoria, amounting in fact to two-thirds of the whole. New Zealand is the next largest producer, New South Wales coming third.

Silver.

Silver.—Up to the year 1882 the quantity of silver raised in New South Wales was very small, but in that and the following years extensive discoveries of this metal, associated principally with lead and copper ore, were made in various parts of the Colony, notably at Boorook, in the New England district, and, later on, at Sunny Corner, near Bathurst, and at Silverton, Broken Hill, and other places on the Barrier Range.

Barrier Ranges and Broken Hill silver-lead mines.

The argentiferous lead ores of the Barrier Ranges and Broken Hill districts of New South Wales have, more than any other, attracted attention. This rich silver-field, which was discovered in 1883 by Charles Rasp, a boundary-rider on Mount Gipps Run, extends over 2,500 square miles of country, and has developed into one of the principal mining centres of the world. It is situated beyond the river Darling, and on the confines of the neighbouring Colony of South Australia. In the Barrier Range district the lodes occur in Silurian metamorphic micaceous schists, intruded by granite, porphyry, and diorite, and traversed by numerous quartz-reefs, some of which are gold-bearing. The Broken Hill lode is the largest as yet discovered. It varies in width from 10 feet to 200 feet, and may be traced for several miles, the country having been taken up all along the line of the lode, and subdivided into numerous leases, held by mining companies and syndicates.

Broken Hill Proprietary Company.

The Broken Hill Proprietary Company hold the premier position. They have erected on their lease a complete smelting plant on the latest and most approved principles, and have enlisted the services of competent managers, whose experience has been gained in the celebrated silver-mining centres of the United States. From the commencement of mining operations in 1885 to the beginning of June, 1891, the Company treated 984,350 tons of silver and silver lead ores, producing 36,512,445 oz. of silver and 151,946 tons of lead, valued in the London market at £8,252,138. They have paid dividends to the amount of £3,880,000, and bonuses amounting to £592,000, besides the nominal value of shares from the several "Blocks," amounting to about £1,744,000, or a total return from the mine of £6,216,000. The sum spent in the erection and construction of plant, from the opening of the property, was £471,322. During the year 3,203 men were employed, of whom 1,686 were engaged under ground. The mine wages and salary sheet for the half-year ending May, 1892, was £141,696, and the smelters, refiners, and ore dressers wages and salaries amounted to £82,338. The net profit for the half-year was £906,552.

Silverton and Thackaringa.

Besides the mines at Broken Hill, there are valuable workings at Silverton and Thackaringa in the same district; the quantity of silver and ore raised during 1891 from the Barrier country was 471,101 tons, representing a value of £3,960,677. As a natural consequence of the success of these mines, numbers of miners were attracted to the district, and the population, which in 1883 consisted of only a few station hands, had risen to a total population of 24,463 souls at the date of the 1891 census, of whom 6,465 men were employed in and about the mines. The aggregate output of these mines, including the Proprietary, to the end of 1891 was valued at £10,079,857. The value of the machinery in the Broken Hill mines was £445,848, and in the Silverton mines £89,316, making a total of £535,164 for the Barrier district. The proximity of Silverton and the Barrier district to the Colony of South Australia could not fail to attract the attention of the business people at Adelaide, who were not slow to realise the advantages which they would obtain by attracting towards their capital the traffic of a region of such immense wealth. The railway system of South Australia was immediately extended to the border, and in the Colony of New South Wales a tramway was laid down, thus connecting the town of Silverton and the mines of Broken Hill with the railway to Adelaide and Port Pirie, in the latter instance reducing the land carriage by some 70 to 80 miles.

In June, 1892, the directors of the various mines in the Broken Hill district decided after a certain date to carry out all future operations by contract, instead of by day labour, the system heretofore prevailing; the miners resented this action by going out on strike, and the mines were laid idle.

Strike at Broken Hill.

The Sunny Corner silver mine during 1886 paid handsome dividends, and produced £160,000 worth of silver, but since that period the yield has largely fallen off. During the year 1891 the company raised from their mine 35,287 tons of ore and smelted 39,046 tons, the production from which was valued at £104,565. The number of men employed in and about the mines was 350, and the value of the smelting plant, &c., £16,024.

Sunny Corner mine.

The quantity and value of silver and silver lead ore exported to the end of 1891 from New South Wales is shown in the following table:—

Silver and silver lead ore exported.

Year.	Silver.		Silver Lead.					Total Value.
	Quantity.	Value.	Quantity.				Value.	
			Ore.		Metal.			
Up to	oz.	£	Tons	cwt.	Tons	cwt.	£	£
1881	725,779	178,405	191	13	....		5,025	183,430
1882	38,618	9,024	11	19	....		360	9,384
1883	77,065	16,488	136	4	....		2,075	18,563
1884	93,660	19,780	9,167	11	....		241,940	261,720
1885	794,174	159,187	2,095	16	190	8	107,626	266,813
1886	1,015,433	197,544	4,802	2	....		294,485	492,029
1887	177,308	32,458	12,529	3	....		541,952	574,410
1888	375,064	66,668	11,739	7	18,102	5	1,075,737	1,142,405
1889	416,895	72,001	46,965	9	34,579	17	1,899,197	1,971,198
1890	496,553	95,410	89,715	15	41,319	18	2,667,144	2,762,554
1891	729,590	134,850	92,383	11	55,396	3	3,484,739	3,619,589
Total......	4,940,139	981,815	269,472	10	149,588	11	10,320,280	11,302,095

It will be seen that the production of silver has, during the past few years, considerably increased, until that of last year largely exceeded the annual production of gold, even in the palmiest days of the diggings. The number of miners engaged in silver

Increase in production of silver.

and lead mines in 1891 was 7,645, and the average value of mineral won, per miner engaged, amounted to £473 9s. 2d.

Accidents in silver-mines.

The total number of accidents which took place in the silver mines of New South Wales during the course of the year 1891 was thirty, thirteen persons losing their lives. Such a small proportion of casualties, when compared to the number of persons engaged in silver-mining, where the elements of danger are great, must be taken as reflecting considerable credit on the management of the mines.

Tin.

Tin.—This mineral occurs principally in the granite and basaltic country in the extreme north of the Colony, at Tenterfield, Emmaville, Tingha, and in other districts of New England. Tin has also been discovered in the Barrier Ranges, at Poolamacca; near Bombala, in the Monaro district, and in the Valley of the Lachlan, but none of these deposits have as yet been worked to any extent. The deposits occur in the shape of stream and lode tin, and are worked by European and Chinese miners. Although this mineral was discovered by the Rev. W. B. Clarke as far back as the year 1853, the opening of the tin-fields of New South Wales only took place in the year 1872, from which date, to the year 1882, the output from the mines, and the export of tin, increased in a remarkable ratio, as illustrated in the following statement:—

Output of tin Mines.

Year.	Ingots and Ore. Value.
1872 to 1876	£1,032,483
1877	248,906
1878	214,613
1879	256,732
1880	354,252
1881	568,795
1882	541,413
1883	448,887
1884	281,188
1885	308,760
1886	277,545
1887	311,889
1888	309,510
1889	207,670
1890	179,057
1891	133,963
Total	£5,675,663

Importance of tin to the Colony.

Tin has, it will be seen, contributed in a very considerable degree to the general development of the natural wealth of the Colony, and in point of value its aggregate production stands in the fourth place next to gold, coal, and silver; for the years 1881–82 its yearly production was even in excess of that of gold. The production of this metal is now one of the settled industries of the country, and, as the supply is practically unlimited, the quantity raised depends almost entirely upon the price realised. The figures given, though differing from those published by the Department of Mines, are correct.

Value of tin exported.

In 1881, when the tin-mining industry was at its greatest height and prosperity, the value of the mineral exported had increased to £568,795 from £249,779 in 1876. In 1882 the production of the former year was nearly maintained, but after that time, owing to protracted dry seasons, which in many cases prevented mining operations, combined with the comparatively low price which the metal brought, the value of the output decreased considerably. Another cause of decreased production is that the shallow deposits of stream tin have been to a great extent exhausted, although the deep deposits and the tin lodes have as yet scarcely been touched, as nearly all the tin hitherto produced has been from alluvial deposits. The principal lode worked up to present time is the Ottery Mine, near Emmaville which produced during 1891, 1,747 tons of 4·3 per cent. tin stone, yielding 75½ tons of block tin. Within the twenty years that have elapsed since the opening of the tin-fields the value of the tin exported from New South Wales amounted to £5,675,663.

Chinese and Europeans in alluvial tin-mines.

In the alluvial tin-fields of Tingha and Emmaville the number of Chinese engaged in this industry greatly exceeded the Europeans. In 1891 the Chinese numbered 1,146, whilst the Europeans working alluvial tin drifts and tin lodes numbered only 797. The total number of miners employed in tin mining in the Colony was 1,951, nearly all of whom were employed in the Northern districts. Only one accident occurred in tin mines in 1891.

Copper.

Copper.—The principal deposits of this mineral are found in the central part of the Colony, between the Macquarie, the Bogan, and the Darling Rivers. Deposits have also been found in the New England and Southern district, as well as at Broken Hill, showing that the mineral is widely diffused throughout the Colony. The very low price of copper within the last few years has deterred many from embarking in operations which showed every promise of success, and some of the mines which had been worked for many years were closed. Still, in spite of the low price of the metal, there is little doubt that, with the adoption of the more modern methods of smelting, such as are now in almost general use in the principal centres of copper production—in Spain, France, England, the United States, and Chili—the rich mines of New South Wales could be made to show handsome results. Another difficulty, common to other branches of the mining industry, lies in the great distance of some of the chief copper-mines from the port of shipment, and the consequent large cost of land-carriage.

Future of copper-mining.

With a reduction in the cost of production and of carriage the copper lodes of New South Wales, which contain ores of a very much higher percentage than those of many well-known mines worked at a profit in other parts of the world, should return satisfactory results, notwithstanding the very large fall in price which has occurred since the failure of the copper syndicate in 1888.

Principal copper-mines.

The more important mines are those of Cobar and Nymagee situated in the Central Division, and within 80 miles of each other. The former employed over 500 men and boys, but is now idle; the deepest shaft is 566 feet, and the width of the lode from 2 to 50 feet. From the date of the commencement of operations in 1876, that company treated 213,182 tons of ore, giving a return equal to 23,611 tons of refined metal, an average production of 11·07 per cent. of copper per ton of ore, and the sum of £154,000 has been paid in dividends to the shareholders. This company has been greatly hampered in smelting operations by the want of fuel in the neighbourhood of the mine. Nymagee employs a complement of 250 persons, and its ores contain an average proportion of copper equal to 11·42 per cent. Since its opening in 1883, to end of 1891, this mine has paid in dividends, £94,000. The yield for 1891 of this mine was 9,335 tons of sulphide ore, which when melted yielded 901 tons of copper, valued at £45,050. The deepest shaft in this mine is 734 feet, and the width of the lode varies from 8 to 20 feet. The refined Nymagee copper is superior to that of Cobar, and commands a higher price in the market. The New Mount Hope and the Great Central copper-mines are also said to be rich in payable ores. The first mentioned employed 36 men and 4 boys in 1891, and raised 1,094 tons of ore, equal to 208¼ tons of copper, valued at £9,158. The greatest depth of shaft in this mine is 340 feet, and the width of lode 58 feet. The total yield of the Cobar district during 1891 is estimated at 1,109¼ tons of copper, valued at £54,208. The Burraga Mine yielded during 1889, 476 tons of copper, valued at £36,625; and during 1890, 420 tons, worth £24,150; work, however, in this mine was discontinued during 1891, as the price obtained for the metal was not remunerative. The deepest shaft is 300 feet, and the lode is said to be 15 feet wide. A remarkably rich copper lode has been found on the Wangoola Estate, 4 miles from Woodstock Railway Station, near Cowra. It only requires a small advance in the price of the metal to cause great activity in the copper-mines of New South Wales..

Produce of copper.

The following table shows the quantity and value of copper, the produce of the Colony, exported from 1859 to 1891 :—

Year.	Ingots and Ore - Value.	Year.	Ingots and Ore—Value.
	£		£
1859 to 1876	408,071	1885	170,993
1877	127,396	1886	122,990
1878	209,030	1887	115,444
1879	210,623	1888	247,304
1880	268,700	1889	122,444
1881	257,884	1890	84,107
1882	182,473	1891	119,195
1883	472,982		
1884	362,287	Total	£3,481,923

The total number of miners engaged in copper-mining in 1891 was 481, a falling off of 221 compared with the previous year. There were no accidents recorded in copper-mines during the year.

Iron.

Iron.—Iron is widely diffused throughout the Colony of New South Wales, and occurs principally in the form of magnetite, brown hematite or goethite, limonite, and bog iron. Deposits of chrome iron are also found. Magnetite is the richest of all the ores of iron, sometimes containing a little over 72 per cent. of available metallic iron, though it is not often found reaching this very high percentage. These ores are widely distributed throughout the Colony. The results of a number of analyses made from deposits at Brown's Creek, in the County of Bathurst, and at Wallerawang, where veins were opened out a few years ago, show that the samples of ore yielded from 40·89 to 56·85 per cent. of metallic iron. At Wallerawang a variety of garnet, containing a large percentage of metal, occurs in conjunction with the ore in the veins, which is described as "extremely well adapted for reduction in the blast furnace." Brown hematite or goethite occurs in very extensive deposits in the Blue Mountain Ranges, the principal centres, so far explored, being situated at Mittagong, Picton, and Berrima, at Lithgow Valley, Wallerawang, in the Rylstone and Mudgee Districts, and in the vicinity of Port Stephens. The result of a number of analyses of this kind of ore denotes that it is very rich in metallic iron, containing a percentage of 42·69 to 64·48 per cent., and in the majority of cases over 55 per cent. of metal. A sample of hematite from the Maitland district contained 60·83 per cent. of metallic iron. A sample of brown hematite from Mount Pleasant, near Wollongong, analysed during 1891, gave 54·28 per cent. of iron. The value of these deposits is enhanced by their almost invariable occurrence in proximity to limestone and coal-beds. It is fortunate, also, that the main lines of railway pass through the regions where the deposits are most easily worked.

Maximum richness of magnetic ores of iron.

Analysis of magnetite from Wallerawang mines.

Brown hematite or goethite.

Limonite—a variety of brown hematite—principally occurs at Lithgow, Eskbank, and Bowenfels in the Blue Mountains, in several parts of the Hunter River coal-field, and at Bulli in the Illawarra district. This ore is usually found very rich in metal, and contains an average of over 50 per cent. of iron, while the English clay bands, which are mostly carbonates, only contain about 30 per cent. of metallic substance. It occurs in lenticular layers of no great extent, in the Coal Measures. *Bog Iron Ore*, which is impure *limonite*, is principally found at Mittagong; and assays of this ore gave a percentage of metal equal to an average of over 45 per cent.

Richness of English and Colonial clay-bands.

Bog iron ore.

No other colony of the group possesses deposits of iron ore approaching in extent or richness those of New South Wales; it is therefore possible that at some future time this Colony will become the great seat of the iron industry of Australia. As illustrating the present extent of the supply required, the following table has been compiled; the figures given include the values of all description of iron, machinery, or iron manufactures.

Australasian imports of iron and iron manufactures.

Value of Iron and Iron Manufactures imported into the various Colonies, 1887–90.

Colony.	1887.	1888.	1889.	1890.	Average Yearly Import, 1887-90.
	£	£	£	£	£
New South Wales	1,221,332	2,041,021	2,141,857	2,715,841	2,030,013
Victoria	1,374,859	1,902,946	2,392,768	2,041,430	1,928,001
Queensland	568,403	918,829	746,877	634,900	717,252
South Australia ..	345,707	475,657	319,291	615,037	438,923
Western Australia ..	185,041	145,974	126,946	156,869	153,707
Tasmania	193,598	203,228	227,870	181,639	201,584
New Zealand......	873,060	697,784	901,801	915,429	847,018
Australasia......	4,762,000	6,385,439	6,857,410	7,261,145	6,316,498

The average yearly import for the four years covered by the above statement amounts to £2,030,013 for New South Wales, and £6,316,498 for Australasia; and the quantity of pig iron required to produce the material represented by these values was approximately 170,000 tons and 500,000 tons per annum, for New South Wales and the whole group of colonies respectively. In a report, dated January, 1891, by the late Mr. C. S. Wilkinson, Government Geologist, it is stated that the iron deposits in the districts of Mittagong, Wallerawang, and Rylstone contained in sight 12,944,000 tons of ore, estimated to yield 5,853,000 tons of metallic iron. These districts are most favourably situated for the establishment of smelting works. Of late, public attention in England has been drawn to the possibility of manufacturing iron within the Colony, and a mining expert was sent out from that country to inspect the iron, lime, and coal deposits, and to report upon the probable cost of establishing the industry in the Colony; so far the visit has been without result.

Extent of iron deposits.

Iron manufactories in N. S. Wales.

The principal works for the manufacture of iron from the ore are situated at Eskbank, near Lithgow, where red siliceous ore, averaging 22 per cent., and brown hematite, yielding 50 per cent. metallic iron, have been successfully treated. Abundance of coal and limestone are found in the neighbourhood. This establishment, however, has for some time abandoned the manufacture of pig iron, for which it was originally built. The work now carried on is the re-rolling of old rails, the manufacture of iron bars, rods, and nails, and of ordinary castings. A successful attempt has been made at Mittagong to make gas-pipes, &c., from iron smelted from the ore, and taken direct to the mould, without first making it into pig iron. Some years ago the iron smelting works at Fitzroy, Mittagong, were established, but after producing a considerable quantity of pig-iron the operations were discontinued. Some samples of ore, coal, and limestone obtained in this district, with pig iron and castings manufactured therefrom, were exhibited at the late Mining Exhibition in London, and obtained a first award.

Chromite.

Chromite is found in the northern portion of New South Wales, in the Clarence and Tamworth districts, and also near Young. It is usually associated with serpentine, but so far very little has been done to develop these valuable deposits.

Antimony.

Antimony.—Deposits of antimony occur in the Colony in various places, chiefly in the Armidale, Bathurst, and Rylstone districts. The principal centre of this industry is at Hillgrove, near Armidale, where the Eleanor Mine, one of the richest in the Colony, is situated. The ore is also worked for gold. The results of a number of analyses, made by the authorities of the Geological Museum, show a percentage of metal ranging from 39·90 to 69·97 per cent. of metal; but notwithstanding these encouraging assays the price of this metal has not been sufficiently high to tempt Colonial producers. A considerable quantity of antimony was raised some years ago at the Corangula mines, in the Macleay district, though these mines are at present idle. Lodes have been opened and partly worked near Nambucca, Drake, Gulgong, and Razorback. The value of antimony raised during 1891 was £22,057, and up to the end of that year, £115,798. As soon as a practicable method of separating the gold from the antimony ores is introduced, it is expected the output will be largely increased.

Manganese.

Manganese.—Deposits of manganese ore have been discovered during the past few years in various parts of New South Wales. Pyrolusite, in the form of black oxide and manganese dioxide, occurs principally in the Bathurst districts and Bendemeer. Wide veins have also been found in the Glen Innes district, near the Newton-Boyd road. Some of the specimens analysed have yielded a very high percentage of metal, but the demand for manganese in the Colony is very trifling, and until a foreign market is found, or local manufactories spring up requiring the metal, the rich deposits of this ore will remain comparatively untouched. The ore is found extensively in conjunction with iron in coal and limestone country, and often contains a small percentage of cobalt.

Bismuth.

Cobalt.

Bismuth is found associated with molybdenum and gold, in quartz-veins in the neighbourhood of Glen Innes, whence the quantity raised has been chiefly obtained. The principal mine is at Kingsgate, where this mineral occurs in a granitic formation, associated with molybdenum, mispickel, and tin. This mine was closed at the end of 1891, there being no demand for the mineral. The largest mass of native bismuth yet discovered in New South Wales weighed more than 30 lb. The value of metal exported up to the end of 1891 was £36,642. Deposits of *Cobalt* have been found at Bungonia, near Goulburn, and Carcoar, but the market for this metal is small, and no attempt has yet been made to produce it on any large scale.

Mercury.

Mercury in the form of *Cinnabar* has been discovered on the Cudgegong River, near Rylestone, and it also occurs at Bingara, Solferino, and Cooma. In the latter place the assays of ore yielded 22 per cent. of mercury, but none of the deposits have been much worked. In all cases it was associated with gold and other minerals.

Platinum and iridosmine.

Platinum and the allied compound metal *Iridosmine* have been found in New South Wales, but so far in inconsiderable quantities, the latter occurring commonly with gold or tin in alluvial drifts. It is believed, however, that the beach deposits at Ballina and other places on the northern coast could be profitably worked for platinum. 15 cwt. of sand from this district were forwarded in November last to platinum merchants in London for treatment. If the value of the consignment should prove payable, a large body of miners could be employed, as the area in which the sand is found is extensive. This metal has also been discovered in the Parkes district, and in lodes near Broken Hill, and Orange.

Graphite.

Graphite has been discovered at Undercliff, in the New England district, from a lode 6 ft. wide. It is of inferior quality. At the Borradaile mine, in the Tenterfield district, 3 tons of ore were raised during 1891, and forwarded to England.

Tellurium.

Another of the noble metals, *Tellurium*, has been discovered at Bingara and other parts of the northern districts, though at present only in such minute quantities as would not repay the cost of working. It has been found at Captain's Flat, in association with bismuth.

Zinc.

Zinc is found usually associated with silver, lead, and copper. The value of zinc won during 1891 was £2,622, and to the end of that period £5,988; but these values are exclusive of the quantity contained in the silver lead ore exported from this Colony to Europe.

NON-METALLIC MINERALS.

Coal.

Coal.—The carboniferous formations extend over a considerable portion of the colony, and workable coal-seams have been discovered in many places. At present, however, the coal-mining industry is confined to those centres, which, from their close proximity to ports of shipment, or to the railway lines, afford ready means for the disposal of the commodity when raised.

Discovery of coal.

Coal was first discovered in the Colony in the year 1797 near Mount Keira, in the Illawarra district, by a man named Clark, who was supercargo of the "Sydney Cove," and had been wrecked in Bass' Straits, and endeavoured to reach Sydney by way of the coast. Later in the same year Lieutenant Shortland discovered the River Hunter, with the coal-beds situated near its mouth. In 1826 the Australian Agricultural Company obtained a grant of 1,000,000 acres of land, together with the sole right, conferred upon them by charter, of working the coal-seams which were known to exist in the Newcastle district. Several mines were opened up, and profitably worked for a number of years; but it was not until the expiration, in 1847, of the monopoly enjoyed by the company, that the coal-mining industry showed signs of extensive development.

A.A. Co.'s monopoly.

Output of coal

In the year named the yearly output of coal had only reached the total of 40,732 tons, of the value of £13,750. Six years afterwards the production had been doubled, and the output of this mineral has rapidly increased, year by year, until coal-mining has now become one of the staple industries of the Colony. Newcastle is singularly well fitted by situation to become the port of supply for all the countries of the southern seas. Every week coal-laden vessels leave its wharves, not only for the Australian colonies, but for China, India, the Pacific Slope of North and South America, Mauritius, the Cape of Good Hope, and other lands. Every provision has been made by the Government for shipping coal, and over two miles of wharves, furnished with cranes and shoots capable of loading 16,200 tons per day, line its shores. The markets of the Colonies are also supplied with quantities of excellent coal from the seams worked in the Illawarra district.

Total quantity obtained.

From the 40,732 tons extracted in 1847, the quantity raised under public competition and enterprise had in 1891 expanded to the large figure of 4,037,929 tons, valued at £1,742,796. This was the largest output of any one year since the commencement of coal-mining. Up to the end of 1891 the total quantity of coal extracted from the New South Wales mines, from their opening in the earlier years of the century, amounted to 53,902,788 tons, valued at £25,809,041.

Mountain coal.

The deposits found in the Blue Mountains, near the line of railway which runs along their crest, at Katoomba, Lithgow, Wallerawang, and elsewhere, supply a portion of the requirements of the city, and other industrial centres in its neighbourhood, as well as part of the western district of the Colony. Coal is also mined at Berrima and other places in that district, whence a large quantity of the coal consumed in the southern districts of the Colony is obtained. The area over which coal is distributed is very great, and has been computed at 23,950 square miles; besides this it is known to underlie the Hawkesbury sandstone in and around Sydney. The diamond-drill was used at Cremorne Point, near

Coal area.

Coal at the Clarence and Richmond.

Extent of coal deposits.

Mossman's Bay, for the purpose of ascertaining whether coal existed beneath the Metropolis. A depth of 3,095 feet was reached, the deepest bore yet put down in Australia. Coal was met with, but the work was discontinued, as there was every reason to believe that a volcanic disturbance, such as is often found in the Southern coal-fields, had occurred at that particular spot. It is considered to have been proved that the Illawarra coal measures extend under Sydney, and it was resolved to put down another bore about half a mile distant from the previous one. The new bore-hole will be the largest ever attempted in Australia, the boring-bit being 5 inches in diameter, and capable of bringing up a 4-inch core. A commencement has already been made with this work. A coal-seam 6 ft. 6½ in. thick has been found on the Moorbank Estate, near Liverpool, at a depth of 2,583 feet. Coal has also been found in the Clarence series, though it has not yet been worked commercially. Three seams were recently proved at Coraki, on the Richmond River. A company has been formed to work these mines, and the greater part of the capital is already subscribed. Several parties are exploiting this district for coal, and at the mine at Aberdeare 150 tons of good coal have been obtained from a seam 6 ft. thick. The quantity of coal in the coal measures down to a depth of 4,000 feet, and excluding seams less than 30 inches, is estimated by the Government Geologist at 78,198 million tons;—this estimate allows for one-third loss in working.

Coal-mines registered in New South Wales.

The number of coal-mines registered in New South Wales during 1891 was 102, as compared with 94 in the previous year These gave employment to 10,820 persons, of whom 8,718 were employed under ground, and 2,102 above ground. The average quantity of coal extracted per miner was 463 tons, as against an average of 368 tons for the previous year. The low average of 1890 is accounted for by the strike that occurred during that year, but there had been a tendency to decline ever since 1882, when the average per miner was 578 tons. The average for 1891 was the highest since 1885.

Coal raised in New South Wales.

Amount of Coal raised in New South Wales, and number of Coal-miners employed.

Year.	Number of persons employed in and about mines.	Number of persons employed under-ground.	Quantity of coal raised.		
			Total.	Per person employed in and about mines.	Per person employed under-ground.
			Tons.	Tons.	Tons.
1882	4,587	3,649	2,109,282	459	578
1883	5,481	4,407	2,521,537	460	572
1884	6,227	5,050	2,749,109	441	544
1885	7,097	5,627	2,878,864	405	511
1886	7,847	6,346	2,830,175	360	446
1887	7,998	6,539	2,922,497	365	447
1888	9,301	7,622	3,203,444	344	420
1889	10,277	8,349	3,655,632	356	438
1890	10,469	8,311	3,060,876	292	368
1891	10,820	8,718	4,037,929	373	463
Average for 10 years.	8,010	6,462	2,996,934	374	464

Condition of the industry.

It is believed that the industry is still suffering to some extent from the effects of the strikes in 1887 and 1890, which not only caused a temporary suspension of trade, and deprived the Colony of the benefit of hewing and handling some 600,000 tons of coal, but induced buyers to seek other markets for the supply of their requirements. Among other things this promoted the development of the coal-mines in Japan, where owing to the cheapness of labour coal can be produced, though possibly of inferior quality, at a price which makes it a formidable competitor to Australian coal. An analysis of the table showing the exports of coal for 1891 will prove that the trade of New South Wales with Eastern ports has not progressed in an equal ratio with the intercolonial trade for example. Still, the output for 1891 was the largest on record, and the export for the year, 2,514,368 tons, exceeded that of the previous year by 692,494 tons, and even that of 1889, hitherto the highest on record, by 126,666 tons.

Output per miner.

From the preceding table it would appear that during the last ten years every miner working underground extracted annually an average of 464 tons, which, calculated on the total value of coal produced, is equivalent to £209 15s. This production is certainly very large, and compares favourably with the results exhibited by the principal coal-raising countries of the world, as will be evident from the following figures given by Mulhall :—

Country.	Tons of coal raised per miner.	Value at the pit's mouth per ton.			Total value of coal raised per miner.		
		£	s.	d.	£	s.	d.
New South Wales	464	0	9	1	209	15	0
Great Britain	330	0	6	0	111	0	0
United States	347	0	8	4	139	0	0
Germany	336	0	5	3	78	0	0
France	196	0	9	0	88	0	0
Belgium	168	0	7	6	63	0	0
Austria	270	0	5	0	57	0	0

Earnings of Miners.

In the absence of information as to the average amount of wages paid to coal-miners in other countries an exact comparison is not possible, but it is abundantly clear, that whatever may be the drawbacks to a miner's lot in the Australian Colonies in no other country is it so satisfactory. The foregoing table proves this, for on the improbable supposition that the miner everywhere receives in wages the same proportion of the value of the coal as in New South Wales, that is, about 40 per cent. of the selling price at the pit's mouth, the average earnings in each country would be :—

Country.	Coal per miner.	Wages per ton of coal.		Earnings of miner per annum.		
	tons.	s.	d.	£	s.	d.
New South Wales	464	3	8	85	1	4
Great Britain	330	2	5	39	17	6
United States	347	3	4	57	16	8
Germany	336	2	1	35	0	0
France	196	3	7	35	2	4
Belgium	168	3	0	25	4	0
Austria	270	2	0	27	0	0

NORTHERN DISTRICT.

Coal-mining in the Northern Districts.

In the Northern or Hunter River District the number of collieries under official inspection in 1891 was 73, employing a complement of 8,309 persons, 6,732 of whom were miners, wheelers, &c. The quantity of coal raised amounted to 2,853,252 tons, or 70·7 per cent. of the whole production of New South Wales, showing an increase of 733,206 tons compared with the output of 1890.

The table following shows the growth of the coal industry within the last ten years in the Hunter District. It will be seen that the quantity of mineral raised and the number of persons employed steadily increased up to the years 1888 and 1890, when the production was interfered with by the strikes. The figures for 1891 are, however, higher than those of any previous year.

Northern District Coal-mines.

Year.	Number of persons employed in and about mines.	Number of persons employed underground.	Quantity of coal raised.		
			Total.	Per person employed in and about mines.	Per person employed under-ground.
			tons.	tons.	tons.
1882	3,475	2,830	1,569,517	452	554
1883	4,184	3,436	1,899,700	454	552
1884	4,735	3,927	2,055,343	434	523
1885	5,380	4,400	2,113,373	393	480
1886	6,133	5,044	2,178,116	355	432
1887	6,287	5,217	2,243,792	356	430
1888	6,873	5,736	2,067,042	300	360
1889	7,559	6,216	2,624,347	347	422
1890	7,874	6,345	2,120,046	269	334
1891	8,309	6,732	2,853,252	343	424

SOUTHERN DISTRICT.

The Southern Collieries.

In the Southern Districts there were in 1891 fifteen collieries under official inspection, giving employment to 2,007 persons, of whom 1,550 were at work underground. These numbers exhibit an increase of 48 persons employed in and about the mines, and

116 underground workers over those so engaged in 1890. There was, moreover, an increase of 240,275 tons in the production. The total quantity raised in 1891 was 837,873 tons, the largest output known in one year in the district. The next highest figures were shown in 1888, when 796,806 tons were raised, an impetus having been given to the trade of these collieries through the strike in the previous year at the Newcastle mines, which caused a large demand for the southern coal.

The history of coal production in this region for the last ten years may be gathered from the following table :—

Southern District Coal-mines.

Year.	Number of persons employed in and about mines.	Number of persons employed underground.	Quantity of coal raised.		
			Total.	Per person employed in and about mines.	Per person employed underground
			tons.	tons.	tons.
1882	878	633	342,126	389	540
1883	998	736	389,419	390	529
1884	1,097	820	419,942	382	512
1885	1,348	918	453,728	336	494
1886	1,298	947	370,830	286	390
1887	1,313	982	376,658	287	383
1888	1,676	1,244	796,806	475	640
1889	2,065	1,598	701,572	339	439
1890	1,959	1,434	597,598	305	417
1891	2,007	1,550	837,873	417	541

WESTERN DISTRICT.

Coal-mining in Western Districts.

In the Western Districts there were in 1891 a total of 13 collieries registered, giving employment to 504 persons, of whom 436 were at work underground. From the subsequent table it will be seen, that, the output in 1891 was in excess of all former years during the decade, not even excepting 1888, when the demand for Western coal was larger than usual, owing to the scarcity caused by the strike in the Northern Collieries. The average quantity of coal raised per miner is much greater in the Western collieries than elsewhere in the Colony. This is due to a variety of causes, but chiefly to the greater thickness of the seams and the more friable character of the coal, and to the circumstance that the coal-beds are almost horizontal and generally at small depths; in some cases the mouths of the pits are worked by means of adits or tunnels instead of shafts, so that the facility for working coal is much greater in these mines than in those at Newcastle. But though the out-put is greater per miner than in the other coal regions, the price for hewing is lower, so that the earnings of the individual miner do not differ greatly wherever the mine is situated.

Coal production in the Western Districts.

The following table shows the growth of coal production in the Western region during the last ten years. The progress has been very regular and in keeping with the advance of settlement in the portion of the colony extending from the Blue Mountains to the Darling, in which the Western collieries have a monopoly of the coal trade. Situated as these mines are in close proximity to the principal iron-fields of New South Wales, their future prospects will be greatly improved should the manufacture of iron from the ore become an established industry in this part of the Colony:—

Western District Coal-mines.

Year.	Number of Persons employed in and about Mines.	Number of Persons employed underground.	Quantity of Coal raised.		
			Total.	Per Person employed in and about Mines.	Per Person employed underground.
			Tons.	Tons.	Tons.
1882	234	186	197,639	844	1,062
1883	299	235	232,418	777	989
1884	395	303	273,824	693	904
1885	369	309	311,763	845	1,009
1886	416	355	281,229	676	792
1887	398	340	302,137	759	888
1888	752	642	339,594	451	529
1889	653	535	329,713	505	616
1890	636	532	343,232	540	645
1891	504	436	346,804	688	795

Accidents in coal-mines.

There were 21 persons killed and 54 persons injured in the New South Wales coal-mines during 1891, making a total of 75 accidents—a large increase upon the number recorded for the previous year, though much below that of 1887, when the disastrous explosion at Bulli took place, whereby 81 persons lost their lives. For the ten years ending with 1890, the average annual loss of life in the British coal-mines was 1·9 per thousand, or at the rate of 159,697 tons of coal raised for every fatal accident. In the New South Wales collieries, for the same period, the rate was 3·3 fatal accidents per thousand miners employed, and only 112,605 tons of coal were raised for every life lost. This very high average of fatal accidents in this Colony resulted from the Bulli disaster, though the circumstances surrounding the mining industry in New South Wales would warrant the expectation of a much lighter average.

Colliery accidents compared with production.

The number of accidents, with the proportion of miners to each fatal and non-fatal case, in New South Wales, is given herewith, as well as the quantity of coal raised to each life lost:—

Accidents in Coal Mines.

Year.	Accidents.		Number of miners employed to each person.		Number of tons of coal raised to each person.	
	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.
1882	33	12	139	382	63,917	175,773
1883	34	15	161	365	74,160	168,102
1884	34	14	183	445	80,858	196,364
1885	40	11	177	645	71,971	261,714
1886	43	29	182	270	65,818	97,592
1887	45	94	178	85	64,944	31,095
1888	43	15	216	620	74,500	213,563
1889	57	41	180	251	64,134	89,162
1890	36	13	291	805	85,024	235,452
1891	54	21	200	515	74,776	192,282

Value of coal raised.

The following table shows the quantity and value of coal raised in the Colony from the earliest record, which, to the close of 1891, was 53,902,788 tons, valued at £25,809,041 :—

Coal raised in the Colony, and average price per Ton.

Period.	Quantity.	Average per ton.	Value.
Prior to	Tons.	s. d.	£
1830	50,780	10 0	25,394
1830 to 1839	111,069	8 9	50,525
1840 ,, 1849	349,961	9 2	155,083
1850 ,, 1859	1,481,761	12 11	1,004,924
1860 ,, 1869	6,174,132	10 2	2,961,910
1870 ,, 1879	12,530,044	10 7	6,838,888
1880	1,466,180	8 5	615,336
1881	1,769,597	6 10	603,248
1882	2,109,282	9 0	948,965
1883	2,521,457	9 6	1,201,942
1884	2,749,109	9 6	1,303,077
1885	2,878,863	9 4	1,340,213
1886	2,830,175	9 3	1,303,164
1887	2,922,497	9 3	1,346,440
1888	3,203,444	9 1	1,455,198
1889	3,655,632	8 11	1,632,849
1890	3,060,876	8 4	1,279,089
1891	4,037,929	8 8	1,742,796
Total......	53,902,788	9 7	25,809,041

Price of coal.

This table shows that coal, like other articles of commerce, is subject to fluctuations in price. These fluctuations have to to a large extent arisen, in the past, from uncertainty in the markets. This uncertainty no longer exists, for the local markets and those of the other Australian Colonies, demand a large share of the coal raised. The proportion of the total taken by Australasia increases every year, and operates in the direction of steadying the price, by removing the principal cause of fluctuation. The highest average price obtained during any year was in 1854, the first of the Crimean war, and the third after the gold rush, when the price per ton was not less than 20s. 6d. In 1872 the output reached 1,000,000 tons, ten years later it had increased to 2,000,000, and in 1891 to 4,037,929 tons.

Local consumption.

The Colony was its own chief consumer during 1891, when out of a total production above stated the consumption amounted to 1,793,200 tons, or over 44 per cent. Victoria came next, with 954,277 tons, or 38 per cent. of a total export of 2,514,368 tons. The quantity of coal required for local consumption denotes a satisfactory increase during most years, as the following statement shows:—

Year.	Tons of Coal.	Year.	Tons of Coal.
1878	569,077	1885	1,122,507
1879	585,332	1886	1,094,310
1880	712,824	1887	1,132,055
1881	739,753	1888	1,279,572
1882	847,737	1889	1,267,930
1883	1,009,012	1890	1,239,002
1884	1,058,346	1891	1,793,200

Consumption per head.

The annual consumption per head increased from 16 cwt. in 1877 to 31 cwt. in 1891. The larger use of steam for railway locomotives, for manfacturing, and other purposes, as well as the multiplication of gas-works, accounts for a great portion of the increase; but it must also be borne in mind that there is a large and increasing demand for bunker coal for ocean-going steamers, which appears not as an export, but as required for home consumption. The amount of coal taken by the steamers during 1891 was little short of 300,000 tons.

Export of coal.

The quantity of coal supplied to the customers of the Colony abroad shows also a large increase during this period:—

Year.	Tons.	Year.	Tons.
1877	915,727	1885	1,756,356
1878	1,006,420	1886	1,735,865
1879	998,049	1887	1,790,442
1880	753,356	1888	1,923,872
1881	1,029,844	1889	2,387,702
1882	1,261,545	1890	1,821,874
1883	1,512,445	1891	2,514,368
1884	1,690,763		

As the coal trade of 1890 was hampered by the strike of that year, the exports of 1891 must necessarily show a large advance over those of 1890; but still, even if compared with the year 1889, the trade of 1891 exhibits satisfactory progress.

Countries to which New South Wales coal is principally exported.

The chief customers of New South Wales for coal during the years 1890–91 will be found in the following table, from which it will be seen how wide is the circle which relies upon the Colony for the supply of one of the chief necessaries of civilized life:—

Countries to which Coal was exported during the years 1889 and 1890.

Country or Port.	1891.	
	Quantity.	Value.
	Tons.	£
Victoria	954,277	474,054
United States	365,623	200,851
Chili	196,186	108,942
New Zealand	168,921	90,662
South Australia	264,125	129,648
Singapore	89,183	49,989
Hongkong	59,227	31,761
Tasmania	73,488	35,758
Java	43,689	23,532
India	21,690	12,149
Philippine Islands	53,909	29,563
Sandwich Islands	34,789	19,128
Peru	24,835	13,821

Countries to which Coal was exported—*continued.*

Country or Port.	1891.	
	Quantity.	Value.
	Tons.	£
Western Australia	35,919	18,096
New Caledonia	23,032	12,479
Fiji	16,864	8,033
South Sea Islands	1,569	856
Mauritius	19,760	10,813
Queensland	14,246	7,291
Great Britain	3,930	1,598
Mexico	12,402	6,258
Guam	5.526	3,040
China	17,900	11,309
Sumatra	1,330	731
New Britain	830	465
Tahiti	377	151
Marshall Islands	879	482
Celebes	2,048	1,126
Kaiser Wilhelm's Land	574	310
New Guinea	6,561	3,361
Ecuador	679	373
Total	2,514,368	1,306,630

Wealth of Colony in coal.

The wealth of the Colony of New South Wales in coal is enormous, and the further expansion of the industry may be regarded as almost a certainty. As the great Australian Continent is only in the early period of the development of its immense resources, the coal-mining industry of New South Wales may also be said to be in its infancy. It is, however, a very vigorous infancy, giving promise of a great future.

Coal as a heat producer.

New South Wales coal, especially that obtained in the northern mines, compares favourably as a heat producer with the best foreign coal. It has the advantage of a greater specific gravity to the extent of 5·4 per cent., and it contains less sulphur. The tabular statement on page 110 illustrates the properties of the principal Australian coals, as contrasted with the mean of British coals. The average of English, Welsh, and Scotch mines will be found after the analysis of Northern District coals, and it will be seen that there is practically little difference between the British and Hunter River coal.

Analysis of Northern District Coals, New South Wales.

Locality.	Specific Gravity.	Composition per cent. exclusive of water only.						Water per cent.	Coke per cent.	Water at 212° converted into steam by 1 lb coal.
		Carbon.	Hydrogen.	Oxygen.	Nitrogen.	Sulphur.	Ash.			lb.
Wallsend	1·333	79·96	6·26	7·08	·68	1·25	4·77	2·75	61·86	13·20
Waratah	1·303	81·06	5·81	6·52	1·23	1·14	4·24	2·21	59·97	14·30
A. A. Co., Newcastle	1·297	78·76	6·34	7·28	·79	1·36	5·47	2·20	62·87	12·92
Greta	1·287	78·41	6·60	9·34	1·43	1·44	2·78	2·25	57·13	13·21
Russell's Mine	1·274	77·37	6·48	10·46	1·51	1·43	2·75	1·85	52·65	13·21
Anvil Creek	1·323	77·15	5·91	6·07	1·46	1·48	7·93	1·74	55·70	12·65
Cardiff Mine	1·286	82·25	4·38	6·95	1·03	·35	5·04	1·85	54·43	……
Mean	1·300	79·28	5·97	7·67	1·16	1·21	4·71	2·122	57·80	13·25
British Coals (mean)...	1·279	80·40	5·19	7·87	1·21	1·25	4·05	0·63 to 9·13	61·00	14·82

Analysis of Western District Coals.

Locality.	Specific gravity.	Composition per cent. exclusive of water only.						Water per cent.	Coke per cent.	Carbolic intensity calculated.	Water at 212° converted into steam by 1 lb. coal.
		Carbon.	Hydrogen.	Oxygen.	Nitrogen.	Sulphur.	Ash.				
											lb.
Eskbank	1·335	72·30	5·43	6·65	·85	1·60	13·17	2·00	62·88	74·26	12·65
Bowenfels	1·399	70·72	5·65	9·65	·93	1·38	11·67	2·36	......	72·45	12·65
Lithgow	1·329	69·41	6·10	11·70	1·03	1·44	10·32	1·95	62·46	72·06	12·10
Vale of Clwydd.........	1·323	69·86	5·82	11·89	1·02	1·40	10·07	2·10	63·18	71·38	12·10
Mean	1·346	70·57	5·75	9·97	·96	1·45	11·31	2·10	62·84	72·54	12·37

Analysis of Southern District Coals.

Locality.	Specific gravity.	Composition per cent. exclusive of water only.						Water per cent.	Coke per cent.	Carbolic intensity calculated.	Water at 212° converted into steam by 1 lb. coal.
		Carbon.	Hydrogen	Oxygen.	Nitrogen.	Sulphur.	Ash.				
											lb.
Nattai	......	91·24	3·60	0·59	......	trace.	4·56	3·28	92·37	85·90	undetermined.
Mt. Kembla	1·363	80·67	5·30	1·58	·70	·87	10·88	1·50	......	82·70	13·21
Mt. Keira	1·379	78·82	5·17	3·87	1·33	1·00	9·81	1·15	74·35	79·83	12·92
Berrima	1·364	69·92	4·55	13·09	·56	1·30	10·58	1·70	64·24	66·53	11·82
Bulli	1·471	76·35	4·75	5·04	......	·55	13·31	1·03	74·78	......	12·21
Mean	1·394	79·40	4·67	4·83	·52	·74	9·82	1·73	76·43	78· 7	12·54

COKE.

Quantity of coke manufactured.

During 1891 there were 30,310 tons of coke manufactured in New South Wales, valued at £34,473. Of that quantity, 9,474 tons came from the collieries of the Northern districts, and 20,836 tons from the Southern mines. It is shown by the returns of the South Australian Customs department that 113,694 tons of coke, valued at £207,029, were imported into South Australia during 1891, almost the whole of which was used for smelting purposes in the Barrier district, where the Broken Hill Proprietary Company alone have consumed about 1,000 tons per week, and that only 8,608 tons out of the quantity mentioned were the produce of New South Wales. It seems a singular circumstance that the silver-miners af New South Wales should so largely rely on England and Germany for their coke when the Colony possesses unlimited supplies of coal from which excellent coke can be manufactured. The smelters, however, complain that the colonial coke contains 6 per cent. more ash than the imported coke; also that it is too friable, which causes the loss through abrasion in transport to mount up as high as 9 per cent., while the coke arrives in such small pieces as to be unfit for smelting the fine lead ores. It is said that very much of these drawbacks could be avoided by using more care in the manufacture of the coke, especially in regard to washing and cleaning the coal before burning. If this were done, it is thought the colonial coke would soon be able to monopolise the market. Some of the collieries are already effecting improvements in their apparatus for making coke, and expect to greatly improve the quality of the article they produce.

Natural coke.

At the old Bulli mine a coal seam 6 feet thick has been for about half that thickness transformed into a sort of natural coke, apparently through the intrusion of igneous matter underneath the seam. This natural coke is largely used on the Sydney tram motors.

KEROSENE SHALE.

Shale deposits.

This mineral is found in various parts of the Colony, but principally at Hartley, Katoomba, Megalong, Bathgate, near Wallerawang, Joadja Creek, Berrima, Mount Kembla, Burragorang, and Greta, and also at Colley Creek, near Murrurundi, and lately in the Capertee District, and in the valley of the Wolgan River. The shale occurs in saucer-shaped deposits, varying in thickness from a few inches to 6 feet. It is a species of cannel-coal, similar to the Boghead mineral of Scotland, but yielding a much larger percentage of volatile hydro-carbon than the Scotch mineral. The richest quality yields upwards of 150 gallons of crude oil per ton, or 18,000 cubic feet of gas, with an illuminating power of thirty-eight or forty-eight sperm candles. The specific gravity is 1·06, amount of sulphur 0·49 per cent., and yield of tar 40 gallons per ton. It is found advantageous for mixing with ordinary coal for the manufacture of gas, and is largely exported to Great Britain, America, and other foreign countries, as well as the neighbouring colonies, for gas purposes. On analysis the following result was obtained from average specimens :—

Volatile Hydro-carbons, including moisture......	82·50	per cent.
Fixed Carbon...	6·50	,,
Ash...	11·00	,,

Quantity and value of shale raised.

Though analyses of this mineral have proved that payable seams occur in many places, only two companies have as yet systematically worked kerosene shale in the Colony—the New South Wales Shale and Oil Company, at Hartley, and the Australian Oil and Mineral Company, at Joadja Creek and Katoomba. These companies not only raise shale for export, but also manufacture from it petroleum oil and other products. The quantity and value of kerosene shale raised since the opening of the mines in 1865 to the end of 1891 amounts to 653,041 tons, of the value of £1,416,712, as shown in the following table :—

Kerosene Shale raised in New South Wales.

Year.	Quantity	Average price per ton.			Total value.	Year.	Quantity.	Average price per ton.			Total value.
	Tons.	£	s.	d.	£		Tons.	£	s.	d.	£
1865	570	4	2	5	2,350	1879	32,519	2	1	2	66,931
1866	2,770	2	18	10	8,150	1880	19,201	2	6	7	44,725
1867	4,079	3	14	9	15,249	1881	27,894	1	9	3	40,748
1868	16,952	2	17	7	48,816	1882	48,065	1	15	0	84,114
1869	7,500	2	10	0	18,750	1883	49,250	1	16	11	90,861
1870	8,580	3	4	3	27,570	1884	31,618	2	5	8	72,176
1871	14,700	2	6	4	34,050	1885	27,462	2	9	0	67,239
1872	11,040	2	12	0	28,700	1886	43,563	2	5	11	99,976
1873	17,850	2	16	7	50,475	1887	40,010	2	3	10	87,761
1874	12,100	2	5	1	27,300	1888	34,869	2	2	3	73,612
1875	6,197	2	10	0	15,500	1889	40,561	1	18	3	77,667
1876	15,998	3	0	0	47,994	1890	56,010	1	17	2	104,103
1877	18,963	2	9	1	46,524	1891	40,349	1	18	9	78,160
1878	24,371	2	6	11	57,211	Total	653,041	2	3	5	1,416,712

Yearly output of shale compared.

Compared with the years 1882 and 1883, the production of the two years 1884 and 1885 exhibits a considerable decrease, somewhat compensated for by the higher price obtained for the shale. The year 1886, however, shows a renewal of activity in the production of this mineral, though a tendency to decrease was again observable in 1888. A satisfactory advance is observable in the figures of 1889 and 1890, but in 1891 there was again a large falling off, notwithstanding the price per ton in 1891 being 1s. 7d. higher than that of the previous year. The cause of the irregularity in the quantity of shale mined will probably be found in the uncertainty of the demand for export, although the quantity required for local consumption has also greatly varied.

DIAMONDS AND GEM-STONES.

The existence of diamonds and other gem-stones in the territory of New South Wales has been known for many years, but no attempt was made to work the deposits until the year 1872. In the course of the following year several deposits of diamantiferous wash were discovered in the country near Inverell, in the New England district.

Number of diamonds found.

The number of diamonds found in the Colony to the end of 1887 is estimated at 50,000, the largest being one of 5⅝ carats, or 16·2 grains. The diamonds occur in old tertiary river drifts, and in the more recent drifts derived from them. The deposits, which occur in the Inverell, Bingara, Mittagong, Cudgegong, and Narrabri districts, are extensive, and have not yet been thoroughly prospected. The New South Wales diamonds are harder and much whiter than the South African diamonds, and are classified on a par with the best Brazilian gems. During the year 1889 the Malacca Company, near Tingha, found diamonds weighing 2,195⅝ carats, valued at £878 5s. In 1891, 12,000 carats of diamonds were won in the Tingha and Inverell districts, but no value is given. Other gem-stones, including the sapphire, emerald, oriental emerald, ruby, opal, amethyst, garnet, chrysolite, topaz, cairngorm, onyx, zircon, &c., have been found in the gold and tin-bearing drifts and river gravels in numerous localities throughout the Colony. The Emerald Proprietary Company in the Emmaville district have sunk two shafts, 100 ft. and 50 ft. respectively; 25,000 carats have been won in a rough state, their value when cut and finished, if of the best quality, is about £2 per carat; four men were employed at this mine and seven others were engaged fossicking for this gem in other parts of this district during 1891. Precious opal is obtained in the cretaceous formation near Wilcannia; mining for opals in this locality is almost at a standstill owing to the scarcity of water. Opals have been found in basalt near the Abercrombie River, and in sandstone near Lismore.

Distribution of gems.

MICA.

Mica.

Mica is known to exist in many parts of New South Wales, but has never yet been worked, although there is a considerable demand for the article, especially if in blocks of fairly large size that could easily be split into thin plates. It is to be met with in the numerous granitic areas that occur in various parts of the Colony, especially in the coarsely-crystalline granitic formations in the Silverton District, and elsewhere in the Barrier Ranges.

MARBLE, BUILDING STONES, FIRE-CLAYS, AND SLATES.

Marble limestone.

The Colony possesses a most abundant supply of all the various kinds of stone, and other materials, for the building and adornment of its cities. Marble limestone is found in great masses near Wallerawang, Bathurst, Molong, Marulan, Tamworth, and Kempsey, localities which are all within convenient distance of the great arteries of communication, and it is obtainable in all its different varieties. Marble quarries have been opened at Cow Flat, Marulan, Wallerawang, Orange, and Tamworth, but only those of Cow Flat and Marulan are being worked. Granite is found near Goulburn, Moruya, Montague Island, and Trial Bay, as well as at many other places throughout the Colony. Most of the granite hitherto used in Sydney has been obtained from Moruya, a port about 180 miles south of Sydney.

Granite.

Building stone.

The Hawkesbury formation, over which the City of Sydney is built, provides the city with an inexhaustible supply of sandstone, of the highest quality for building purposes. This material is admirably adapted for architectural effect, being of a pleasant colour, fine grain, and very easily worked. The beauty of Sydney street architecture is due in no inconsiderable degree to the free use of this excellent sandstone.

Bluestone.

Bluestone, which is extensively used as road metal and for the ballasting of the railway lines, is obtained at Kiama, Prospect, Pennant Hills, and Bowral. This stone has not yet been used to any extent for building purposes.

The Coal Measures also contain numerous beds of fire-clays, and in every part of the Colony excellent clays, well adapted for brick-making purposes, are extensively worked. Slates are found in several districts, but are principally quarried at Gundagai, and in the surrounding district, as well as near Bathurst and Goulburn. It will be seen, therefore, that the Colony has no need to import building material of any description, as it possesses a supply amply sufficient to provide for its own wants and those of its neighbours.

Fire-clays.

Building materials.

ASBESTOS.

Asbestos has been found in veins in serpentine in the Gundagai, Bathurst, and Barrier Range districts—in the latter in considerable quantities.

Asbestos.

ALUM.

Alum-stone occurs as a large deposit at Bulladelah, about 35 miles from Port Stephens, the yield averaging about 80 per cent. of alum; 3,000 tons of alumite have been raised from this mine, 1,500 tons of which have been shipped to England, where the Company have erected works for the treatment of the raw material.

Alum.

PART VII.

Flora.

THE surface of New South Wales presents a vegetation characterized by little variation in form and colour. The dense foliage and varieties of tints with which the old world is familiar are alike wanting in Australia, where the dull evergreen leaves alter little with the changes of the seasons. What the flora of the country lacks in picturesqueness it, however, makes up in usefulness. The task of collecting, describing, and classifying the Australian flora has been undertaken by several eminent scientists, amongst whom are Bentham, Müeller, and Hooker. The "Flora Australiensis" of the two first-named of these botanists, Hooker's "Flora of Tasmania," the "Census of Australian Plants," and the "Eucalyptographia" of Baron von Müeller, are works of standard value. In dealing, however, with the description of the varied specimens of plant life found in Australia there remained the task of describing those species whose properties rendered them capable of application to industrial life. To Mr. J. H. Maiden, Curator of the Sydney Technological Museum, and Consulting Botanist to the Forest Department, the Colony is indebted for an excellent classification of those varieties which properly belong to Australian economic botany. The number of specimens so far described in each class will be found below, and it will probably appear to many as a revelation that the country should possess resources so varied and elements of wealth so promising, and at the same time so singularly neglected.

Australian economic botany.

Classification of Australian plants of economic value:—

Classification of Plants.	Number of varieties.
1. Human food and food adjuncts	212
2. Forage plants—	
a. Grasses	158
b. Exclusive of grasses, and including plants injurious to stock	92
3. Drugs	123
4. Gums, resins, and kinos—	
a. Gums	40
b. Resins	21
c. Kinos	39
5. Oils—	
a. Volatile or essential	47
b. Expressed or fixed	10
6. Perfumes	14
7. Dyes	35
8. Tans	87
9. Timbers	630
10. Fibres	67
11. Miscellaneous	38
Total	1,613

Neglect of natural resources.

It does not come within the scope of this volume to deal at length with a subject so comprehensive as economic botany; it may, however, be pointed out that beyond some of the timber trees and a very limited number of oils and tans, few of the resources of the Colony disclosed in the foregoing list have received any practical application.

Forests.

Forests extend over almost the whole area of the Colony, excepting portions of the Monaro, the Lachlan, the Murrumbidgee districts, and the Trans Darling region, where extensive treeless plains occur, clothed with salt-bush, scrub, or varieties of natural grasses. The country covered by timber may be divided into three classes—open, brush, and scrub forests. Open forests cover the greatest portion of the surface of the Colony, and are found in every formation. The varieties of trees met with are chiefly species of the Eucalyptus tribe, and Melaleuca, Callistemon, and other genera of the order Myrtaceæ.

Prevalence of eucalypti.

The prevalence of the eucalypti, and the large extent covered by the forests, give the country a rather monotonous aspect. But the park-like appearance of the open forests and the beauty of the many flowering shrubs win admiration, in spite of the sameness of the trees; while even the dull, greyish blue of the foliage of the gum-trees, when relieved by the yellow blossoms of the wattle, the graceful myall, or the beautiful and shapely kurrajong, is not without its attractiveness. The trees are for the most part straight and cylindrical in the trunk, and when full grown, their first branch is at a considerable height from the ground. The roots of the eucalyptus lie at no great distance from the surface soil, an adaptation of nature to the peculiar climatic conditions of the country. The finest specimens of most of the timber trees, those yielding the most valuable timber, are found on ridges and hill sides, in places frequently too rough and stony for cultivation. This circumstance is in many ways fortunate for the Colony. In the course of settlement, when the rich plains are denuded of their trees, and when scarcity will make timber more appreciated than it is at present, land not adapted for agricultural settlement will still be available for the cultivation of the finest trees. It would be impossible, in the limits of this volume, to enumerate all the trees which are of commercial value; but a list of the best known varieties will not be without interest.

Chief varieties of timber trees.

On the river flats immense specimens of flooded gum *(E. rostrata)* and apple-trees *(Angophora subvelutina)* mark the course of the streams. The flooded gum grows to a height of 100 feet, and its wood is most useful for heavy work, and for structures liable to attack by the white ant. The apple-tree has more spread than the majority of indigenous trees, its wood is strong, heavy, and durable. The distribution of the species is very extensive.

Boxtree.

On the ridges and mountain sides other varieties of trees predominate. The box reaches 180 feet in height, with a thickness of 6 feet, and the timber is used chiefly for firewood, for which purpose it has no superior. The bastard box, supposed to be a cross between the box and grey gum, is widely distributed over the Colony. The quality of the timber varies greatly, according to the place of growth; some varieties are surpassed amongst hard woods by nothing except ironbark.

Ironbark.

Ironbark *(E. leucoxylon* and *E. paniculata)* is a tree of moderate size, usually when full grown from 60 to 80 feet in height, though the white ironbark attains a height of 150 feet. The timber is heavy, and renowned for its great strength, fine specimens bearing a tensile strain nearly twice as great as the best oak. The timber is used most extensively for wharves and bridges, as also for housework. Ironbark is very widely distributed, and frequently grows to perfection on the poorest soil. The ironbark and box are slow growing trees, as compared with many other varieties of eucalyptus, such as the blue gum, which latter attains a great height in a very few years.

Blue gum.

The blue gum *(E. globulus)*, one of the finest of the eucalyptus tribe, is only met with in portions of the southern table-land, but the blue gum *(E. goniocalyx)*, also called flooded gum, grows extensively in the coastal districts. It attains a moderate height, but is rather thicker in the trunk than most varieties of gum trees, sometimes reaching 7 feet in diameter. The timber is greatly in demand, owing to its comparative lightness, and is easily worked, being used for all purposes to which hardwood is applied.

Spotted gum.

The spotted gum (*E. Maculata*) grows in all the coast districts, and in some portions of the interior, generally where the soil is poor. This is one of the handsomest of the forest trees, and attains a height of 100 feet. The quality of the wood varies greatly, according to the habitat and the character of the soil; when good, it is considered specially adapted for ship-building.

Stringybark.

Stringybark (*E. eugenioides*), so called from its peculiar fibrous bark, grows chiefly on the northern table-lands. It is a large tree, and its wood is of great and general utility. The bark is extensively used for roofing, and forms a very useful paper-making material.

Messmate.

The messmate *(E. obliqua)*, also called stringybark, is one of the largest of Australian trees, being frequently met with more than 250 feet in height. It grows in the south-eastern portion of the Colony. The bark is used for roofing, being similar in character to that of the tree just described; it would also form an excellent paper-making material.

Blood-wood.

The blood-wood *(E. corymbosa)* is a large tree, growing in the coastal districts of the Colony. The timber is used chiefly for fencing purposes, and for railway sleepers.

Grey gum.

The grey gum *(E. tereticornis)* grows to a height of 150 feet, and is extensively distributed over the whole of the coastal districts. It yields excellent timber, hardly inferior to ironbark. There are several varieties of this tree, some of which produce wood of remarkable beauty, and of great durability.

Tallow-wood.

The tallow-wood (*E. microcorys*) is a very large tree, growing extensively in the forests north of Sydney. Its wood is more easily wrought than most of the hardwoods, and has great strength and durability, being employed largely for floors, and other building purposes, and for the decking of ships.

Mountain ash.

The mountain ash, or white-top (*E. virgata*), is found both on the table-lands and in the coast districts. Its timber is in demand for coopers' work, and for rough carpentry. The tree grows to about 150 feet in height.

Turpentine tree.

The turpentine tree *(Syncarpia laurifolia)* is found mainly in the district lying between the Shoalhaven and the Macleay. It grows to magnificent proportions, sometimes reaching a height of 200 feet, with a diameter of 6 feet. The timber is largely used for piling, and other work in sea-water, as it resists the attack of the teredo better than any other New South Wales timber.

Wooden blocks for paving.

Of late years the utility of several hardwoods has been extended by the adoption of wood pavement for many of the principal streets within the metropolitan area. Blackbutt, tallow-wood, spotted gum, and turpentine were principally used in the paving, and the blocks, after being subject to heavy and continuous traffic for nearly ten years, exhibited but slight wear. Red gum has been tried for the same purpose in the busiest thoroughfare in Melbourne, and was found to answer admirably. Extensive forests of this timber exist in the Murray district, which are under the control of the Forest Department. There is every reason to believe that the extended cultivation of the Eucalypti will be the means in the near future of bringing in a considerable revenue to the State.

BRUSH FORESTS.

Features of brush forests.

The brush forests cover a considerable extent of country along the coast. The trees found in them differ entirely from those of the open forests, and there is no lack of variety either in the character of the trees or the colour of their foliage. Tall graceful fern trees, sometimes attaining a height of 60 feet, beautiful varieties of palms, cabbage-trees, and Moreton Bay figs of enormous proportions, are prominent features of the brush, though these are perhaps more ornamental than useful. There are, however, found in the brush forests timber trees of the greatest value.

Red and white cedar.

The red and white cedar *(Cedrela toona* and *Melia composita)* were once abundant in the northern forests, but at present most of the full grown trees are met with only on the high ridges. The red cedar is a magnificent timber tree, often attaining a height of 150 feet, with a girth of over 30 feet. Its timber is of great value, being light, easily wrought, durable, splendidly grained, and well adapted for furniture and cabinet-making. The white cedar is a pretty tree growing to a height of 80 feet, with a diameter of 3 feet. Its timber is soft and easily worked, but is deficient in tensile strength and durability, and therefore in no great demand.

Silky oak.

The silky oak (*Grevillia Hilliana*, *G. robusta*) grows to the height of almost 100 feet, under favourable circumstances, and yields a wood highly prized for staves.

Tulip-wood.

The tulip-wood (*Harpullia pendula*) is a tall tree with beautifully marked timber of various shades, and susceptible of a fine polish.

Ash

The ash, or pigeon berry-tree, grows to a great height, sometimes reaching 130 feet, with a diameter of 5 feet. Its timber is light and tough, and in good demand.

Colonial pine.

The colonial pine *(Araucaria Cunninghamii)* is one of the finest trees of Australia, sometimes reaching a height of 200 feet, with a trunk 5 feet thick. Its timber is extensively used, being cheaper than any imported pine; it is white in colour, and easily wrought.

Beech.

Native beech (*Gmelina Leichhardtii*) is also a tree of noble proportions, reaching 150 feet in height. Its timber is greatly in demand, being superior to most native timber when exposed, as it neither shrinks nor warps. In colour the wood is white or silvery, with a fine close grain.

Besides the varieties mentioned above, there are in the brush forests many other trees, yielding timber of large size and of great value, but the abundance of timber of other descriptions more readily accessible has hitherto satisfied the local demand, and the resources of these forests have been almost entirely overlooked.

Great variety of timber in brush forests.

The character of the vegetation of the brush forests alters considerably according to the latitude. The trees of the Araucaria and Flindersia tribes, as well as the principal varieties of cedar, find a home chiefly in the northern parts of the Colony, while many of the trees growing in the south have no representatives in the northern forests. The soil of the brush lands is wonderfully fertile, consisting as it does of decomposed volcanic rocks, enriched by the accumulation of decayed vegetable matter, and when cleared it yields an abundant return.

SCRUB FORESTS.

Scrub forests.

The scrub forests are found in the poor soils, principally in the Lachlan and Darling districts. The chief species represented are the pine, the acacia, and the eucalyptus, but although some of the trees are of great beauty, they have little commercial value. The most uninviting portion of the Colony is covered with scrub, and the mallee districts, clothed as they are with stunted timber—a variety of the eucalyptus—impress the traveller more unfavourably than would even a barren waste.

Wattle cultivation.

The consumption of wattle-bark is very great in this Colony, where there is a large demand for tanning purposes. Through the want of proper conservation of the trees and the increasing use of the bark, there is a continual depletion of the natural scrubs of wattle. During 1891, 74,160 cwt. of wattle-bark were imported, valued at £28,162, a large proportion of which was obtained from Tasmania. It will thus be readily seen that there is room for a large development of the trade in this Colony. The Forest Department is endeavouring to prevent the indiscriminate stripping of the bark and destruction of the trees, which should have the effect of stimulating the industry.

Prevalence of hardwoods.

Dividing the timber trees of New South Wales into the natural divisions of hardwoods, softwoods, and pinewoods, the largest portion, both as to the variety of trees and the area covered by the forests, comes under the first-mentioned class. All the trees already referred to as growing in the open forests are hardwoods; and besides those described there are many others, of recognized commercial value, which are extensively used.

Hardwoods.

Australian hardwood trees are remarkable for the great size of the beams which may be obtained from them, as well as for the extreme toughness and durability of their wood. In a subsequent table the mean strength of various timbers is given, from which it will be seen that the grey ironbark has a resistance to breaking equal to 17,900 lb. per square inch, as compared with a mean of 11,800 lb. for English oak, and 15,500 for teak. None of the other timbers has so high a resistance to breaking as this description of ironbark, but nearly all the varieties have a greater strength than oak. As already pointed out, the quality of the wood is materially influenced by the soil on which the trees grow, and the resistance to breaking shown in the subsequent table is the average of various samples, the range in some woods being considerable. The absence of branches for the greater portion of the height enables the timber to be obtained to the best advantage; and as full-grown trees of most varieties are rarely less than 100 feet high, with corresponding girth, the quantity of timber obtainable is very large.

Softwoods.

The softwoods of the Colony are found chiefly in the brush forests of the coast district, and rival those of any other part of the world. Some of the least known of the brush forest trees have wood grained and marked most beautifully, which is capable of receiving the highest polish, while others are fragrantly perfumed. These woods are adapted to the finest description of cabinet-making, and it is strange that their merits should have so long escaped attention. Amongst the chief varieties of woods of this class may be mentioned the red cedar, now unfortunately disappearing, the beautiful wood of which, somewhat resembling mahogany, is admirably adapted for the finer kinds of cabinet-makers' work. Some of the cedar trees grow to immense size, as much as 2,500 cubic feet of valuable timber having been obtained from one tree. In addition to the cedar may be mentioned rosewood, tulipwood, yellowwood, white maple, white beech, myall, marblewood, mock orange, and many others. Besides their use for cabinet-making, many of the brush timbers are of great utility for the rougher kinds of carpentry, while some, both hard and soft woods, are admirably adapted for coachbuilders' and coopers' work.

Beauty of brush timber.

Pinewoods.

The chief description of pine growing in New South Wales is the Moreton Bay white pine (*Araucaria Cunninghamii*), found in the coast districts, as far south as the Bellinger. It is soft, light, and easily wrought, and suitable for all the interior wood-work of houses, as well as for cabinet-making. The red or black pine (*Frenela endlicherii*) is extensively distributed over the Liverpool Plains, and in the Lachlan and Darling River districts, as well as around Berrima. It is beautifully marked in the grain, takes a fine polish, and has an agreeable fragrance. There are numerous other varieties of pine, but these resemble in their main features the trees already described.

Colonial deal.

Colonial deal is an excellent timber, and is obtained in very large scantling, the tree frequently reaching 120 feet in height. It is soft, close-grained, easily wrought, and remarkably free from knots. Its use, therefore, is extensive for cabinet-makers' work and house fittings.

Importation of timber.

Notwithstanding the great resources of the Colony as a timber-growing country, the importation of wood is very considerable. In 1891 the quantity amounted to 17,147,100 feet of dressed timber, valued at £147,000, and 88,015,800 feet of undressed, valued at £575,600; besides which there were sundries to the value of £38,300, consisting chiefly of doors, laths, and shooks and staves, the total value of timber imported being £760,900. The importation of timber is chiefly from New Zealand, the United States, Scandinavia, the Canadian Dominion, the United Kingdom, and South Australia. The timber imported from the latter Colony was almost wholly required for the Broken Hill district. The timber export trade of South Australia is largely a re-export one.

Quantity imported from each country.

During 1891 the Colony received 1,747,929 feet of dressed and 26,041,259 feet undressed timber from South Australia; and 748,236 feet dressed and 22,678,659 feet undressed from New Zealand; over 49 per cent. of all the timber imported thus coming from those two Colonies. From the United States the

Colony imported 2,166,588 feet dressed and 26,011,989 feet undressed timber—more than two and a-half times the quantity imported from the States in the previous year. The imports from Scandinavia amounted to 12,133,357 feet, a quantity about three times that of 1890; from the Canadian Dominion the Colony received 5,586,133 feet; from the United Kingdom, about 2¾ million feet; while over 2½ million feet came from the Colony of Victoria.

Exportation of timber.

The export of colonial hardwood is relatively small as compared with the timber imported. During the year 1891, 367,424 feet of dressed timber, valued at £2,799, and 12,078,430 feet of rough or undressed, valued at £44,437, also sundries, consisting almost exclusively of shooks and staves, to the value of £4,845, or a total value of £52,081, were exported.

Exports.

During the ten years which closed with 1891 the exports of New South Wales timber were :—

Year.	Dressed Timber.	Undressed Timber.
	Feet of 1 in. thick.	Feet of 1 in. thick.
1882	132,894	5,771,868
1883	218,517	8,611,237
1884	320,093	14,239,211
1885	203,930	9,777,797
1886	133,973	13,255,804
1887	179,572	15,541,220
1888	255,889	32,519,134
1889	206,469	24,306,206
1890	393,232	20,819,819
1891	367,424	12,078,430

It will be seen that the quantity exported varied greatly; this is entirely due to the fluctuation in the amount taken by

Victoria. From the year 1884 large public works were executed in that colony, requiring considerable quantities of hardwood, which was more readily procurable from New South Wales. Out of a total export of 14,239,211 feet of undressed timber in 1884, Victoria took 11,170,536; in 1890, 18,956,376 feet out of a total export of 20,819,819 feet; and in 1891, 10,026,223 feet, the total export being 12,078,430.

Intercolonial exportation.

No necessity to import timber.

As already pointed out, although the Colony is endowed with great wealth of timber, not only of hardwood but of softwood and pine, the imports very largely exceed the exports. The imports, however, are chiefly pine and softwood. The pine grown in the Colony is in some respects inferior to both oregon and kauri, hence the large importation of these timbers, but the softwoods of the country will bear favourable comparison with those of any part of the world, both for durability and beauty. They are easily wrought and well adapted for the finer kind of carpentry and cabinet-work, and it is only because they are so little known that the softwoods of the brush forests have not been more extensively used.

Strength of N.S.W. timber.

The specific gravity and resistance to breaking of various New South Wales timbers, and of some of the best known European and other varieties, are shown in the following table. With regard to the New South Wales timbers it should be mentioned that the tests were made with picked specimens, so that the results are perhaps considerably higher than would be obtained in actual practice. The modulus of rupture is eighteen times the load which is required to break a bar 1 in. square, supported at two points 1 foot apart, and loaded in the middle between the points of support, or

$$s = \frac{3\,W\,l}{2\,bd^2}$$

when W = load applied at middle of beam between supports; b = breadth, d = depth, l = length of beam, and s = co-efficient of rupture or breaking stress per square inch.

Specific Gravity and Strength of New South Wales Timber, as compared with European and other Varieties of Timber.

New South Wales timber trees.	Specific gravity.	Resistance to breaking or modulus of rupture. =s	European and other Foreign timber trees.	Specific gravity.	Resistance to breaking or modulus of rupture. =s
		lb. per sq. inch.			lb. per sq. inch.
Hardwoods—					
Spotted gum	·995	13,300	Ash	·753	13,000
Grey gum	·917	13,100	Beech	·690	10,500
Flooded gum	1·178	14,800	Birch	·711	11,700
Red gum	·995	6,900	Bullet-tree	1·046	19,000
Woollybutt	1·022	12,700	Chestnut	·535	10,660
Blackbutt	1·067	13,700	Ebony	1·193	27,000
White ironbark	1·177	16,900	Elm	·544	7,900
Grey ironbark	1·182	17,900	Fir, Red pine	·48 to ·70	8,300
Red ironbark	1·224	16,300	,, Spruce	·48 to ·70	11,100
Forest oak	1·208	15,500	,, Larch	·50 to ·56	7,500
Turpentine	1·109	11,700	Greenheart	1·001	22,000
Stringybark	1·141	13,900	Kauri pine (New Zealand)	·579	11,000
Blackwood	1·129	10,300	Lance wood	·675 to 1·01	17,350
Tallowwood	1·233	15,260	Lignum vitæ	·65 to 1·33	12,000
Australian teak	1·006	14,400	Mahogany (Honduras)	·56	11,500
Mahogany	1·201	14,500	,, (Spanish)	·85	7,600
Forest mahogany	1·156	13,800	Oak (British)	·69 to ·99	11,800
Swamp mahogany	1·216	12,100	,, (Dantzic)	·69 to ·99	8,700
White beech	1·008	15,600	,, (American)	·99	10,600
Mountain ash	1·065	11,500	Sycamore	·59	9,600
Rosewood	1·189	10,600	Teak (Indian)	·66 to ·88	15,500
Pine	·868	8,800	Willow	·40	6,600

FOREST CONSERVATION.

Destruction of timber.

The necessity of preserving the timber resources of the Colony, and preventing the ruthless destruction of the best species of brush and hardwood, hitherto carried on by settlers and timber-getters, principally in the Clarence River district, and in the eucalyptus forests on the Murray, decided the Government, in 1871, to establish a certain number of forest reserves throughout the country, in which permission to cut timber should be granted upon payment of a fixed fee. It soon became apparent that stringent regulations alone could put a stop to the reckless operations of the licensed timber-getters, but it was not until September, 1878, that such regulations were issued. These appeared not a day too soon, as the best species of cedar, which abounded in the Clarence River districts, had been exploited to such a wasteful extent that the supply of this magnificent timber threatened to give out. Cutting down indiscriminately trees of all sizes, and clearing the lower lands of their best timber, the cedar-cutters, after disposing of all that could be cheaply transported, or easily floated down the rivers in time of flood, left a considerable surplus of felled timber on the ground to lie and rot. They then travelled further north, to carry on the same depredations along the rivers of the neighbouring Colony of Queensland. The same system had been pursued in the gum forests of the Murray. Considerable quantities of excellent timber were destroyed in the forest reserves of that part of the Colony, to the detriment of the district, which was deprived of its natural wealth, and to the injury of the Colony at large, which suffered the loss of much of its best timber without receiving an equivalent in revenue.

Forest Conservation Branch formed.

In 1875 the office of Forest Ranger was first created, and this led to the formation of a Forest Conservation Branch attached to the Department of Mines, which was established in March, 1882. During the year 1889, however, the Forest Conservation Branch was placed under the administration of the Colonial Secretary, but has since been again put under the control of the Minister for Mines and Agriculture. In the year 1882 the

Colony was subdivided into a number of districts. These are frequently inspected by forest rangers, whose duty is to report on the existing state of proclaimed reserves, control the operations of licensed timber-getters, receive royalties on the various kinds of timber, upon which such dues may be levied, and report upon applications to ringbark trees on Crown lands, whether comprised in State forests, reserves, or otherwise. The Forest rangers. forest rangers and assistants employed by the department have the supervision of twenty-one State forests with an area of 97,712 acres. The timber reserves throughout the Colony number 992, and cover an area of 5,502,941 acres, so that the total area of land devoted to the conservation of timber in New South Wales amounts to 5,600,653 acres. In April, 1890, Mr. J. E. Brown, of South Australia, was appointed Director-General of Forests of New South Wales.

Timber obtained from reserves. On the reserves subject to royalty, the quantity of timber cut in 1891 amounted to 11,760,497 superficial feet, in addition to which 5,619 sleepers and 442 piles were obtained. In 1890 the quantity of timber cut measured 10,978,967 superficial feet, and the number of piles cut was 107.

Revenue from timber licenses. The revenue derived from the issue of timber licenses, from royalty, permits, and other dues, amounted in 1891 to £18,455, and the revenue received from the forest reserves of the Crown since the coming into force of the regulations proclaimed on the 24th of September, 1878, in each of the following years was—

	£
1879	7,310
1880	8,328
1881	10,156
1882	12,327
1883	16,301
1884	17,565
1885	13,144
1886	13,934
1887	13,629
1888	19,019
1889	16,521
1890	15,437
1891	18,455

or a total for 13 years of £182,126 which, before the introduction of the present system, would have been a loss to the country, without taking into consideration the much greater loss caused by the indiscriminate felling carried on in former years. Under the present regulations care is taken to preserve from destruction all timber below a certain girth, measured at a height of 5 feet from the ground, according to a careful classification of the various timbers at present in demand. Trees not named in this list may be cut at the minimum girth that may be endorsed on the license, or as specified in writing by the forest ranger in charge of the reserve.

Girth of timber which may be felled.

The prescribed girth is set forth hereunder :—

Hardwoods.

Timber.	Girth. ft.	Girth. in.	Timber.	Girth. ft.	Girth. in.
Blackbutt	7	6	Blood-wood	7	0
Tallow-wood	7	6	Mountain ash	6	0
Red gum or flooded gum	7	6	Mahogany (forest)	6	0
Gray gum	7	0	*Ironbark (red, gray, and broad-leaved)	7	6
Woollybutt	6	6	Peppermint or red-wood	5	6
Brush or white box	6	6	Swamp mahogany	5	6
Turpentine	7	0	*Stringybark	5	0
Blue gum	6	6	Blackwood	4	0
Spotted gum	6	6	Yellow and white box	4	0
Messmate	7	0			

Softwoods, &c.

Timber.	Girth. ft.	Girth. in.	Timber.	Girth. ft.	Girth. in.
Red cedar	9	0	Black, red, or white pine (Frenela)	3	0
Hoop or Moreton Bay pine	7	6	Swamp oak	3	0
White beech (Gmelina)	7	0	Forest oak	2	3
Silky oak	6	0			
Rosewood	6	0			

* West of Great Dividing Range, 4½ feet for ironbark, 4 feet for stringybark.

State nursery and cultivation of trees.

The Forest Conservation Branch does not solely limit its operations to the preservation of native trees. It is also charged with the creation of a State nursery, the site for which was selected at Wyong, in the beautiful district of Brisbane Water, where the acclimatization of valuable foreign timber trees, and the conservation of such of the best indigenous species as might be otherwise likely to disappear, are attended to. The area set apart for the nursery is 65 acres, of which 30 acres are cleared and cultivated.

The total stock of trees and shrubs was, in 1891, about 1,200,000. About 100,000 trees from the nursery were distributed to the public schools in the Colony for the celebration of Arbor Day, instituted in 1890 by the then Minister for Public Instruction.

Formation of Plantations.

The formation of plantations in various parts of the Colony, and along railway lines, also forms part of a programme which is yearly becoming enlarged. Plantations of the American *Catalpa speciosa* have been made on the Railway Reserve at Cootamundra, where there are about 2,700 catalpa, black walnut, and other trees planted on the 6¼ acres cleared, and wattle plantations have been formed along the southern railway line from Minto to Burradoo, and at Otford, on the Illawarra Line. Red cedar is extensively cultivated, under the supervision of the department, in several of the north-eastern counties of the Colony. The most important cedar forest reserve is the Don Dorrigo, at the head of the Bellinger and Macleay Rivers, which, at the end of 1891, contained at least 33,500 trees, root cuttings, and self-sown seedlings. Other reserves exist in the counties of Durham, Drake, Brisbane, Parry, and Buckland. Six thousand young cedar trees have also been planted at the State nursery near Gosford. The total number of cedar cuttings planted to the end of 1891 was about 40,000, in addition to which a great many plants were raised from seed. In addition to the nursery previously mentioned, a plantation was formed at Hogan's Brush in the same vicinity, and it is proposed to establish plantations at Wilcannia and Broken Hill, for the growth of sugar gums. Extensive red-gum forest tracts exist on the banks of the Murray River, which are now under the supervision of the Forest Department.

Australian timbers.

The splendid collection of Australian timbers, formerly prepared for the purpose of display at previous exhibitions, was transferred during 1891 from the Mines Department to that of the Forests. Unfortunately there is not at present sufficient accommodation within the Forest Department to fully display this magnificent collection.

State forests and timber reserves.

Reserves for the preservation of timber are divided into two classes, viz., State Forests and Timber Reserves, and the latter are subdivided into three sub-classes, A, B, and C, according to their importance, and the particular quality and value of the timber which they contain.

Timber licenses and permits.

Licenses are issued to cut timber on reserves in class A at a fixed fee of £6 per annum, or 10s. per month, and without royalty; on reserves in class B the fee demanded amounts to £9, or 15s. per month; on reserves in class C general permits to cut timber for saw-mills are issued at a rate of £6 per annum, to which is added the payment of a royalty, which differs according to the value of the timber felled, and is based on the following classification:—

Saw-mill timber placed in the	1st class,	1s. 6d.	per 100 superficial feet.
,, ,,	2nd ,,	1s. 3d.	,, ,,
,, ,,	3rd ,,	1s.	,, ,,
,, ,,	4th ,,	9d.	,, ,,
,, ,,	5th ,,	6d.	,, ,,
,, ,,	6th ,,	3d.	,, ,,

Timber-cutting on Crown lands.

Licenses are also issued to cut and remove timber on ordinary Crown lands—excepting State forests, timber reserves, reserves for public recreation, or sites for towns and villages, or permanently dedicated for any public purpose; also lands within 1½ chain of any navigable river, or held under conditional lease, measured for sale, within an enclosure of less than 200 acres, or within half a mile of a head station. The fee in this case is fixed at £3 per annum, or 15s. per quarter, or 5s. for any current month, and the license enables the holder to cut and remove any kind of timber, except cedar. The license fee for cutting cedar, and for shipping wattle-bark, is fixed at £6 per annum, and no cedar-tree of less girth than 9 feet, measured at 5 feet from the ground, may be felled without special authority.

Permits to cut and strip bark.

Permits are issued for cutting mining props, and for thinning out timber, in order to improve the growth of the trees remaining;

for cutting and removing from a reserve a specified number and kind of trees; and also for stripping wattle-bark, or the bark of other trees for tanning purposes.

Penalties.

Infringements of the timber regulations are punishable by fine, not exceeding £5 for the first offence, £10 for the second, and £20 for the third, irrespective of the value of the timber and material destroyed, for which also the offender may be held responsible. The number of prosecutions for illegally cutting and removing timber in 1891 was 137, out of which 109 convictions were obtained, and the total amount of penalties was £112.

Initiation of Forestry.

Forestry is as yet only in its initial stages in this Colony—and, in fact, in Australasia—and the Director-General of Forests strongly advocates the establishment of a School of Forestry, in which the information necessary for the proper conduct of the work might be imparted. This, if carried out, would prove of great benefit to the Colonies generally.

PART VIII.

Fauna.

THE fauna of New South Wales is characterised by the absence of the forms of animal life familiar to the Old World, and the presence of genera and species peculiar to the Australian Continent.

MAMMALIA.

Marsupials.

The order of mammalia is represented in this Colony by the oldest animal known, the marsupial, which is extinct in all other parts of the world except North America. The Macropidæ include several kinds of kangaroos and wallabies, the characteristics of which are too well known to need more than passing reference. The progress of settlement has driven these animals from the more densely-populated parts of the Colony, but in the country districts they are still numerous enough to cause very considerable damage to the natural grasses. So serious has been the injury thus wrought, that the State and run-holders pay a small sum per head for the destruction of these animals. The number of kangaroos and wallabies, as estimated by Inspectors of Stock, existing in the Colony in 1891, was about 4,542,000, besides which it is estimated that there were 3,310,000 hares, 28,700 native dogs, and 10,600 wild pigs—the latter of course being the descendants of imported animals.

Number of kangaroos, &c.

The genus Paramelidæ is represented by the wombat, and several kinds of rats and rabbit-rats, which latter burrow underground like their European prototype. They abound particularly in the western districts.

Phalangystæ.

The Phalangystæ, which embrace several varieties of opossums, are found in all parts of New South Wales. Some of the specimens of this family are very handsome, and their thick soft furs afford a valuable article of commerce.

Dingo.

The dingo, or native dog (*Canis Dingo*), is found in all parts of the Australian mainland. It will inbreed with the domestic dog, and crosses are common throughout the settlements. The dingo does not bark, and, according to Dr. Geo. Bennett, it is allied to the wild dog of India, and may probably have been introduced by the Malays some centuries ago. Great destruction has been wrought amongst the flocks of the settlers by these animals, and a price is paid for every native dog destroyed.

Native Cats.

There are two varieties of native cats (*Dasyurus Maculatus* and *D. Viverrinus*), both very handsomely marked. They are nocturnal animals, incapable of domestication, and prey upon birds and small mammals.

Echidnæ.

The Echidnæ are represented by several varieties of spiny ant-eaters, somewhat resembling the English hedgehog. The favourite food of these animals is the various kinds of ants, which are found all over the country. The female Echidna carries its young in a pouch, which is only visible during the breeding season.

Flying foxes.

Flying foxes, and numerous varieties of bats, are also indigenous to New South Wales, and make great depredations among the fruit-trees.

Platypus.

Of all the animals found in the Colony the most curious and interesting is, perhaps, the *Ornithorhynchus paradoxus*, or Duck-billed platypus, called by the aborigines the Mallangong or Tambreet. This animal is a mammal, and has now been authoritatively shown to be also oviparous. The eggs brought forth are membranous, so that the platypus must be classed amongst the Reptilia.

Most of the animals above mentioned appear to be more destructive than useful, and if we except the trade in opossum and native-cat furs, and kangaroo skins—the exports of which, in 1891, were valued at £48,173—the commercial value of the indigenous mammals is very small. They are being gradually displaced, as civilisation advances, by the more useful animals of the Old World, for which the climate of New South Wales seems especially adapted, and which now form the principal source of the wealth of its inhabitants. The acclimatisation of the more useful European species is quickly followed by the destruction of indigenous animals, and the wilds of the interior of the Colony, which erstwhile were the abode of the kangaroo and dingo, are now the home of vast flocks.

Destruction of native animals.

Extinct species.

Geological research has brought to light the remains of numerous extinct species of gigantic mammalia. The largest of these prehistoric animals was the *Diprotodon*, a marsupial quadruped, which, according to Professor Owen, was as large as the rhinoceros or hippopotamus. Fossil remains of another large marsupial, the *Nototherium*, somewhat resembling a tapir, and of a marsupial lion (*Thylacoleo*) have also been discovered. Bones of gigantic kangaroos (*Macropus titan*) have been frequently met with, as well as those of a species of wombat larger than that actually in existence.

The remains of animals belonging to two distinct genera, representatives of which still exist in Tasmania, the *Thylacinus*, or pouched hyena, and the *Sarcophilus*, more commonly known as the Tasmanian devil, have also been found in the fossilised state.

BIRDS.

Variety of birds.

All the more important families of birds are represented in the fauna of New South Wales, which contains also a number of families peculiar to the Colony. Few countries can boast of a greater variety of beautiful birds. The parrot family is represented by a large number of species, including the love bird (*Melopsittacus undulatus*), the green parrot, and many kinds of lories, all gorgeously clothed; and amongst the larger species, the white and black cockatoo, yellow and pink-crested, and the grey pink-crested gallahs. The family of honey-eaters *(Meliphagidæ)* is also represented by numerous and very beautiful varieties.

Amongst the larger kinds of birds found in the Colony are the *Megapodidæ*, which includes the brush turkey. These exist in great numbers in the western parts of the Colony, and their flesh is highly prized. In the western districts are also found the emu, the largest of Australian birds, and the native companion, a large water bird, somewhat like the crane in appearance.

Emu.

Lyre-bird.

In the more thickly-timbered parts of the brush forests, the home of the stately tree-fern, is found the lyre-bird *(Menura superba)* a species of pheasant, whose tail forms a most graceful ornament. Here also abound the satin-bird, species of regent-birds, and the rifle-bird, all famed for the beauty of their plumage.

Aquatic birds.

Amongst water-birds are several species of cranes, and enormous numbers of wild fowl of all descriptions, as well as black swans. The latter is essentially an Australian bird, and may be met with in all parts of the Colony. The great kingfisher, or laughing-jackass, so named from its extraordinary cry, is one of the most useful of birds, owing to the readiness with which it destroys snakes. Magpies and mocking-birds may be included amongst those denizens of the forest which more prominently attract the attention of travellers. There are also several species of owls, and other night-birds, and the eagle family has not a few representatives.

The kingfisher.

The pigeon tribe.

The pigeon tribe is found in large numbers, especially in the great primæval forests of the coast districts. In the cedar brushes of the Liverpool Range white-headed fruit pigeons are very numerous; and in the brush forests of the Clarence, the Richmond, the Macleay, and Illawarra, the top-knot and large-tailed pigeons, and the Wonga Wonga *(Leucosarcia picata)*, so prized for its large size and the whiteness and delicacy of its flesh, are very plentiful. The bronze-winged pigeon is common to almost all parts of the Colony. Several varieties of these birds are remarkable for their beautiful plumage, their size, and the excellence of their flesh. One of the finest varieties, the partridge bronze-winged pigeon, is found almost exclusively in the plains of the interior. Doves are also numerous, and most of the species are extremely delicate and beautiful. The little turtle-dove of the Murray River *(Geopelia cuneatra)* is the prettiest specimen of this family.

Other varieties.

Besides the varieties of birds mentioned above there are others, of perhaps less note, but numerous, and frequently very beautiful. They are all admirably described and depicted in the celebrated work of Dr. Gould, which occupies a high rank amongst the scientific publications of the century.

FISHES.

Fishing industry neglected.

The seas which wash the shores of New South Wales abound with fish, but none of the resources of the Colony has been so much neglected as the fishing industry. All the best fishing-grounds lie within a moderate distance of Sydney, and, as recently pointed out by the Fisheries Commission, it is not necessary, in order to obtain the fish most adapted for food, to despatch large smacks or fishing vessels, victualled and equipped for a cruise of several months, to fishing grounds distant hundreds of miles from home. The coast of the Colony presents many natural features peculiarly favourable to the existence of a very large supply of the best food fishes. In the quiet waters of its numerous bays and estuaries, and in the vast lakes and lagoons communicating with the sea, are found shelter and sustenance, as well as excellent breeding-grounds. The principal fishes found on the coast are not migratory, and as a consequence may nearly always be procured in the market.

Classification of fishes.

Sixty different families of fishes, comprising 348 species, are found in New South Wales waters. According to the classification of the late Rev. J. S. Tenison-Woods, S. J., these are as follows :—

Name of family.	No. of species.	Name of family.	No. of species.
Percidæ	50	Ophiocephalidæ	1
Squamipinnes	4	Trachypteridæ	1
Nandidæ	2	Pomæcentridæ	4
Mullidæ	3	Labridæ	18
Sparidæ	14	Gadopsidæ	1
Cirrhitidæ	6	Gadidæ	4
Scorpænidæ	11	Pleuronectidæ	9
Teuthididæ	2	Siluridæ	5
Berycidæ	3	Scopelidæ	6
Kurtidæ	2	Salmonidæ	1
Polynemidæ	2	Galaxidæ	7
Sciænidæ	2	Scombresocidæ	6
Xiphiidæ	1	Clupeidæ	12
Trichiuridæ	1	Chirocentridæ	1
Acronuridæ	1	Symbrachidæ	1
Carangidæ	15	Murænidæ	11
Cyttidæ	1	Syngnathidæ	6
Coryphænidæ	2	Sclerodermi	21
Scombridæ	10	Gymnodontes	12
Trachinidæ	5	Carcharidæ	8
Batrachidæ	1	Lamnidæ	1
Pediculati	4	Scyllidæ	3
Cottidæ	7	Cestraciontidæ	2
Cataphracti	1	Spinacidæ	1
Gobiidæ	15	Rhinidæ	1
Blenniidæ	17	Pristiophoridæ	1
Sphyrænidæ	3	Rhinobatidæ	2
Atherinidæ	4	Trygonidæ	3
Mugilidæ	7	Torpedinidæ	1
Fistularidæ	1	Raiidæ	1

The edible fishes comprise 105 different species ; amongst the best known may be mentioned :

The schnapper.

The schnapper *(Pagrus unicolor)*, the most valuable of all Australian fishes, is found along the whole extent of the coast, and is very abundant. It is a deep-water fish, found generally near rocky points or reefs running out into the sea. The schnappers "school," as it is termed, during the summer months, and are then most plentiful. The young fish, known as red bream, frequents the harbours and estuaries of the coast, but is never found in shallow water. The schnapper is caught by the hook, which it takes freely, as it will attack almost any bait. It sometimes attains a very large size, weighing as much as 30 lb.

Nannigai.

The nannigai is a deep-water fish, caught with the hook, and ranks high in public estimation as an edible fish. The supply is not large, as the fish is not specially sought after, being chiefly obtained by fishermen in search of schnapper. The nannigai is scientifically interesting as one of the oldest forms of bony-fishes now surviving.

Rock-cod.

The black rock-cod is considered one of the best of Australian fish, and is also a deep-water fish, never captured by the net. It is found more abundantly in the warmer waters of the north of the Colony, where, as a rule, it attains larger proportions than to the southward of Sydney. It grows to a great size, specimens from 35 to 40 lb. being not uncommon.

Salmon.

A fish of great size and beauty, known in Australia as the salmon, is found off the coast in prodigious quantities. It has no affinity whatever to the true salmon, and is inferior as an article of food.

Flathead.

The flathead, a fine fish, of which there are several varieties, is captured both by the hook and net. It is of excellent quality and ranks high amongst New South Wales fishes.

Whiting.

There are four species of whiting found in these waters. The common sand-whiting and the trumpeter-whiting are both very abundant, but the other two species are more rare. The sand-whiting is perhaps the fish most in demand in the metropolitan markets, where it is to be obtained all the year round.

Jew-fish.

The jew-fish is the largest edible fish found on the New South Wales coast, attaining sometimes a length of 5 feet. It is found at all seasons, but most frequently during summer. The teraglin is of the same family as the jew-fish, though it does not reach an equal size. The air bladder is large and of excellent quality, being of great value for the making of isinglass.

Mackerel.

The mackerel is obtained in enormous quantities off the coast, and sometimes even in the harbours. It is a good fish when eaten fresh, but it decomposes rapidly.

Mullets.

The family of *Mugilidæ*, or mullets, is well represented in Australian waters. The sea mullet is a large fish, often attaining a length of 2 feet, and a weight of 8 lb. It is regarded by some authorities as unsurpassed in richness and delicacy of flavour by any fish in the world; and it visits these shores in countless numbers in the season when it is in the best condition. While young the fish keeps entirely to the creeks and lakes, where it increases in size very rapidly, but when full-grown it seeks the open waters.

Gar-fish.

There are four species of gar-fish found on the New South Wales coast. The Sydney gar-fish is very abundant, especially towards the end of summer, making its appearance in shoals, sometimes of enormous size. The river gar-fish is even of better quality than the last mentioned, but is not so plentiful as formerly. The other species are seldom met with. There are numerous other varieties of fishes found in the waters of New South Wales, many of which are very valuable as articles of food, but for the most part are neither so numerous nor so easily obtained as those referred to.

Destructive fishes.

Destructive fishes are by no means rare; the shark family being largely represented, not only in the deep-sea, off the coast, but even in the harbours. The shark is not, however, absolutely valueless. The fins find a ready sale in the Chinese markets; the skin also has some commercial value, while from the liver is extracted a large quantity of valuable oil, equal in every respect to cod-liver oil.

Neglect of fisheries.

As already pointed out, the fisheries of New South Wales have been much neglected, and, as a further instance of this, it may be mentioned that although during the winter season immense shoals of herrings visit these coasts, no attempt is made to take and preserve them. The Rev. J. E. Tenison-Woods, Sir William Macleay, and the members of the Fisheries Commission, have strongly directed attention to the value of this fish. It is quite as abundant as the herring of Scotland, and superior in flavour; and, preserved like sardines, it would no doubt rival that delicacy. There is ample evidence that the application of a little capital, and intelligent management, would make the herring fishery a very profitable industry.

Fresh-water fish.

In Sydney the supply of fresh-water fish is very limited, although the rivers of the Colony produce some most excellent specimens. The rivers Murray, Murrumbidgee, Lachlan, and Darling are the most plentifully stocked, the Murray cod *(Oligorus Mitchelli)* being perhaps the most highly esteemed of their fishes. Another fish of the same species is the *Oligorus Macquariensis*, which is to be met with in the upper branches of the Clarence. Both these specimens of Murray cod have been found weighing as much as 100 ℔. The silver perch and several kinds of the Percidæ family, so highly prized for their delicacy, are plentiful in the rivers. In the Richmond River the cat-fish *(Copidoglanis Tandanus)* is very common, whilst herrings and mullet are caught in almost all the eastern rivers of the Colony.

Fish acclimatization.

Little systematic attempt has yet been made to acclimatize European varieties of edible fishes, although success would most probably attend any efforts in this direction, every difficulty having been overcome in Victoria, New Zealand, and Tasmania. Some five or six thousand trout ova, presented by the Geelong Acclimatisation Society, have been distributed in various localities, including the Prospect Reservoir.

Crustaceæ.

Among the Crustaceæ, which abound on the coast and in the water-courses of the interior, the lobster and several varieties of salt and fresh-water crayfish are most noticeable. The prawn (*Penæus esculentus*) is very abundant in all the shallow bays and harbours.

Oysters.

The oysters of New South Wales are of excellent quality, and formerly were very plentiful. The commercial species of the Colony is the familiar rock-oyster *(Ostrea glomerata)*; but a mud-oyster (*Ostrea edulis*) occurs in some numbers along the coast, though, owing to the greater abundance of the rock variety, it has not yet received much commercial attention. The rock-oyster of New South Wales in form and general aspect resembles the Portuguese and the American oysters, and corresponds with them in its breeding habits, which are essentially different from those of the English, Victorian, and Tasmanian mud-oyster. These latter at certain times are said to be out of season, and are filled with a grey, gritty matter, that feels like sand in the mouth. This gritty substance is shown by the microscope to consist of millions of minute oysters; for this species of oyster nurses its brood in the mantle-cavities of the parent up to an advanced state of development. The rock-oyster, however, turns out its young to shift for itself, not only in a shell-less, but even in an unfertilized condition; and such is its fecundity, that the rocks and every available holding-place become literally plastered with the embryo brood, insomuch that up to a comparatively recent date artificial culture was very little resorted to. But owing to bad management the oyster-beds of Port Jackson, Port Stephens, the Hawkesbury, and the Shoalhaven were greatly injured, so that the markets of the metropolis had to depend upon the beds of the Clarence, the Richmond, and other northern rivers, as well as other places beyond the Colony, for their supply of oysters. The appointment of the Fisheries Commission, in 1880, probably prevented the entire extinction of the oyster industry in New South Wales, though the operations of the Commission have been much impeded through lack of sufficient legislation to enable them to check the improvidence of the lessees, who strip the oyster-beds without regard to future supply. There is but little doubt that the establishment of "parcs" like those which may be seen along the coasts of France and Belgium, where oyster culture is conducted on scientific principles, would be remunerative, as the demand for this delicacy is great and continually increasing.

The Fisheries Commission.

Oyster culture.

Remarkable fishes.

Several varieties of fishes which have long disappeared from other parts of the world are still represented in New South Wales.

Amongst these are the cestracion, or Port Jackson shark, whose teeth resemble those of the fossil acrodis found in the mesozoic deposits, and the ceratodus, an existing ganoid, otherwise exclusively represented in the trias formation, its anatomy showing a connecting link between a lizard and a fish. Amongst other remarkable fishes found in these waters, several may be enumerated. The frog fish, belonging to the order Pediculati, has fins adapted for walking on the ground rather than for swimming, and is found floating in-shore amongst marine plants, from which it is with difficulty distinguished, owing to its great resemblance to them in point of colour. The hopping fish, a variety of gobii, or sea-gudgeon, has its fins developed into legs, so that the animal is able to leap along the mud flats which it frequents. The eyes of this fish are curiously placed at the top of its head, and are capable of being thrust far out of their sockets, and of moving independently of one another. The Hippocampus, or sea-horse, so named from a resemblance in the shape of the head and fore part of the body to that of the horse, is a very singular fish, but the phyllopteryx is perhaps, the most remarkable fish of Australia, if not of the world. It is like the ghost of a sea-horse, with its winding-sheet all in ribbons around it. Its tattered cerements are in shape and colour like the sea-weed it frequents, so that it hides and feeds with safety. The dugong (*Halicore Australis*) was formerly met with at the mouths of the Richmond, Tweed, and Brunswick Rivers, but is now seldom seen south of the Brisbane River, in Queensland. It resembles the porpoise in shape and size, but has no dorsal fin. The skin is heavy and thick, and is said to make excellent leather. The habits of this animal are those of a graminivorous ruminant, its stomach being exactly like that of an ox; it frequents the flats and shallows along the margin of the shore, and feeds upon the grass which is found thereon. Like the whale family, it suckles its young, is warm-blooded, and therefore is incorrectly described as a fish. The dugong attains a large size, sometimes measuring 14 feet long and 10 feet in girth. An animal of such dimensions would weigh about 300 lb.

The sea-horse.

Dugong.

The Fish Market.

During 1891 the Fish Market, Woolloomooloo, was supplied with 60,869 baskets fish, including 2,271 dozen schnapper, 46 dozen salmon (*arripis solar*), $588\frac{1}{3}$ dozen king-fish, 76 dozen jew-fish, $765\frac{5}{12}$ dozen teraglin, $32\frac{2}{3}$ dozen nannigai, and $3,332\frac{1}{2}$ dozen cray-fish, besides $3,459\frac{1}{2}$ baskets prawns. The amount realized at the market for the fish referred to was £42,278. 4,727 bags of oysters were taken from the tidal waters of the Colony in 1891, and 16,696 bags were imported from Queensland and New Zealand. 31,340 lb. weight of Murray River cod were exported to Victoria during the year. Considerable quantities of prawns arrive in Sydney by coasting steamers, which never go into the Fish Market, and are not included above.

REPTILES.

Venomous snakes.

The snake and lizard families number many varieties, which are distributed over all parts of the country. These reptiles, however have generally disappeared from the settled portions of the Colony, having been deprived of the means of subsistence which the condition of the country in its natural state afforded them. Several species of snakes are venomous, particularly the death-adder, the black snake, the brown, and the tiger snake, but accidents due to snake bite are now of rare occurrence. Most reptiles retreat at the approach of man, and there is comparatively little danger to be apprehended from their presence. Lizards are common, very beautifully marked, and some species, particularly the iguanas, attain a considerable size.

Saurians.

Although the rivers of the Colony of Queensland are the abode of several species of alligators, those of New South Wales are entirely free from the presence of these dangerous saurians.

PART IX.

Shipping and Commerce.

THE commerce of New South Wales is exceeded in value by that of no other colony or dependency of Great Britain, India alone excepted. India, with a population about 246 times larger, has a trade hardly four times as great as this Colony, while the Dominion, whose population numbers over four times that of New South Wales, does not equal it in the value of its commerce. The trade of these countries for the years shown was:—

Country.	Imports.	Exports.	Total trade.
	£	£	£
India (1890-91)	93,909,856	102,350,526	196,260,382
Canada (1890)..................	25,022,226	19,866,355	44,888,581
New South Wales (1891) ...	25,383,397	25,944,020	51,327,417

SHIPPING.

Early shipping records.

Prior to the year 1822 the records of the shipping trade of the Colony are very meagre; in the year mentioned, however, the shipping amounted to 71 vessels inwards, aggregating a tonnage of 22,924; and 60 vessels outwards, with a total tonnage of 20,793. Twenty-eight years afterwards, just before the separation of Port Phillip, the figures stood thus: 976 vessels inwards, with a tonnage of 234,215 tons, and 1,014 vessels outwards, with a tonnage of 263,849 tons. In 1851, the year of the separation of Victoria from the parent Colony, the trade fell to 553 vessels inwards, measuring 153,002 tons, and 503 vessels outwards of 139,020 tons.

Separation of Queensland caused no decline in trade.

The separation of Queensland caused no decline in the trade of the Colony, as shown by the returns. Possibly the classing of northern boats as foreign traders, instead of as coasters, would be the cause of even an apparent increase, for in 1860, the year following the separation, the shipping amounted to 1,424 vessels inwards, with a tonnage of 427,835 tons, and 1,438 vessels outwards of 431,484 tons, a considerable advance on the figures of the previous year. From 1860 to the present time trade has rapidly increased, and at a greater ratio than the population; so that in 1891 the tonnage, inwards, amounted to 2,821,898 tons, and the outward tonnage to 2,872,338, or 5,694,236 tons in all.

Increase of shipping.

The rate of increase has been fairly constant, though checked occasionally by the occurrence of bad seasons here, or failure of prices in the European markets. The following table shows the quantity and tonnage of shipping arriving and departing from New South Wales, at intervals of five years, from the date of the earliest records to the year 1891. A marked falling off is shown in the figures for 1890, a circumstance attributable to the maritime strike which was so unfortunate a feature of the industrial operations of that year :—

Vessels Entered and Cleared.

Year.	Inwards.		Outwards.	
	Number.	Tonnage.	Number.	Tonnage.
1822	71	22,924	60	20,793
1825	85	24,559	75	22,688
1830	157	31,225	147	28,822
1835	260	63,019	269	66,964
1840	709	178,958	665	163,704
1845	597	105,352	614	103,961
1850	976	234,215	1,014	263,849
1855	1,152	353,323	1,185	362,482
1860	1,424	427,835	1,438	431,484
1865	1,912	635,888	2,120	690,294
1870	1,858	689,820	2,066	771,942
1875	2,376	1,109,086	2,294	1,059,101
1880	2,108	1,242,458	2,043	1,190,321
1885	2,601	2,088,307	2,583	2,044,770
1890	2,889	2,413,247	2,777	2,348,625
1891	3,021	2,821,898	3,100	2,872,338

Shipping of New South Wales compared with other colonies.

The shipping tonnage of New South Wales greatly exceeds that of any other colony of the Australian group. Victoria stands next; after which in their order come South Australia, New Zealand, Tasmania, Western Australia, and Queensland. Of the total shipping of Australasia in 1891 about one-third entered and cleared in New South Wales ports.

Trade of Colony in British hands.

The trade of the Colony is, to a very large extent, in British hands, though there has been a notable increase in foreign shipping since 1881. In 1870 the British shipping entered and cleared amounted to 1,333,410 tons, while in 1891 it was 4,902,607 tons, showing an increase of 3,569,197 tons. The foreign shipping amounted to 128,352 tons in 1870, and 791,629 tons in 1891, being an increase of 663,277 tons.

French and German mail steamers.

The advent of the French line of Messageries Maritimes, in 1883, and of two lines of German steamships some four years later, has tended to increase the amount of the foreign trade of the Colony; but, nevertheless, the tonnage under the British flag in 1891 was 86·1 per cent. of the whole. The annexed table shows the respective amounts of each class for the years mentioned :—

British and Foreign Vessels Entered and Cleared.

Year	British.	Foreign.	Total.
	Tons.	Tons.	Tons.
1870	1,333,410	128,352	1,461,762
1875	2,001,641	166,546	2,168,187
1880	2,259,924	172,855	2,432,779
1885	3,615,582	517,495	4,133,077
1886	3,746,725	511,879	4,258,604
1887	3,836,527	486,231	4,322,758
1888	4,141,551	623,868	4,765,419
1889	4,659,798	661,381	5,321,179
1890	4,156,963	604,909	4,761,872
1891	4,902,607	791,629	5,694,236

Of the tonnage set down as British, the larger portion is owned or registered in the colonies. In 1870, out of 1,333,410 tons of shipping entered and cleared under the British flag, 964,718 tons, or 72·3 per cent., were Australasian; in 1880, out of 2,259,924 tons entered and cleared, 1,499,236 tons, or 66·3 per cent., represented colonial shipping; while in 1891 the colonial shipping amounted to 3,088,891 tons, out of a total of 4,902,607 tons, or 63 per cent. The amount of British and British-colonial shipping entered and cleared from New South Wales ports for the years shown was as follows :—

British shipping.

Tonnage of British Vessels trading to New South Wales.

Year.	Shipping belonging—		Total, inwards and outwards
	To Great Britain.	To British possessions.	
	Tons.	Tons.	Tons.
1870	368,692	964,718	1,333,410
1875	736,969	1,260,958	1,997,927
1880	760,688	1,499,236	2,259,924
1885	1,520,091	2,095,491	3,615,582
1886	1,503,921	2,242,804	3,746,725
1887	1,599,191	2,237,336	3,836,527
1888	1,717,549	2,424,002	4,141,551
1889	1,842,727	2,817,071	4,659,798
1890	1,577,172	2,579,791	4,156,963
1891	1,813,716	3,088,891	4,902,607

Tonnage of foreign vessels.

Compared with the figures just given, the tonnage of the foreign vessels trading with New South Wales will appear very small. Taking the year 1891, for which the inward and outward tonnage for the principal nationalities are given below, Germany stands first, then America, after which comes France. Scandinavia is the only other nation whose carrying trade with the Colony is important.

Foreign vessels Entered and Cleared in New South Wales during 1891 :—

	Tonnage.
Germany	257,107
U.S. America	183,718
France	173,751
Sweden and Norway	118,323
Japan	14,378
Other nations	44,352
Total..	791,629

Steam and sailing tonnage.

The records prior to the year 1876 do not distinguish the steamers from the sailing vessels, but the modern tendency to supersede sailing vessels by steam is abundantly apparent even in the fifteen years which have since elapsed. In 1876 the steam tonnage was 912,554 as compared with 1,215,171 tons of sailing vessels, being 43 per cent. and 57 per cent., respectively. In 1891, the relative positions were transposed, for the tonnage of sailing ships had increased but slightly over the figures of 1876, being only 1,394,445 tons, or 24·5 per cent., as against 4,299,791 tons of steam, or 75·5 per cent. of the whole shipping. The increase of steam tonnage for the fifteen years has, therefore, been rather more than 371 per cent. The progress of the tonnage of each class will be seen from the following figures:—

Steam and Sailing Vessels Entered and Cleared.

Year.	Steam.	Sailing.	Year.	Steam.	Sailing.
	Tons.	Tons.		Tons.	Tons.
1876	912,554	1,215,171	1888	3,264,509	1,500,910
1880	1,550,372	882,407	1889	3,718,378	1,602,801
1885	2,791,843	1,341,234	1890	3,654,814	1,107,058
1886	2,982,122	1,276,482	1891	4,299,791	1,394,445
1887	3,145,548	1,177,210			

Tonnage arriving in ballast.

The advantage offered by the New South Wales trade to shipowners is illustrated by the large amount of tonnage coming to the Colony in ballast, and the small amount leaving without cargo. A large proportion of the vessels arriving in ballast come from the ports of the neighbouring colonies, having delivered a general cargo there, and, being unable to obtain return freight, go to Newcastle for a cargo of coal. The largest amount of tonnage in any one year since 1870 entered in ballast was in 1889, when it reached 704,267 tons, and the largest cleared was 82,956 tons in

1891. The tonnage entered and cleared for the years shown was :—

Tonnage Entered and Cleared in Ballast.

Year.	Entered.	Cleared.	Year.	Entered.	Cleared.
	Tons.	Tons.		Tons.	Tons.
1870	237,246	21,004	1887	507,177	36,434
1875	320,921	12,830	1888	628,732	41,735
1880	217,763	16,219	1889	704,267	65,898
1885	345,366	53,381	1890	544,264	66,846
1886	353,969	40,635	1891	632,617	82,956

Value of imports per ton.

Notwithstanding the fact that between one-fourth and one-fifth of the tonnage arriving in the Colony is in ballast, as against nearly one-thirty-fifth of the clearances, the average value of freights inward is higher than of those outward. Thus in 1891 the average value of the cargoes imported was £7 9s. 3d. per ton of vessels inward, or, if an allowance be made for ships in ballast, the value per ton was £9 12s. 5d. The mean value of goods exported per ton of shipping outward was £6 0s. 7d., and allowing for vessels leaving in ballast, £6 4s. 2d. ; in the former case 19·2 per cent. and in the latter 37·1 per cent. lower than the value of tonnage imported.

New South Wales exports have, generally speaking, a high value per ton, and the lower value of the exports per ton than the imports is due to the large amount of coal exported, the quantity for 1891 having been 2,514,368 tons weight, equivalent to 1,706,700 tons measurement, out of a total of 2,872,338. The value of the exports of the Colony per ton exceeds that of the imports in regard to those sent to the United Kingdom, Belgium, France, and a few minor foreign States. In every other case, as will be seen from the following statement, the import value per ton is much higher than the export :—

Value per Ton Measurement of Imports and Exports of New South Wales, 1891.

Country.	Value of imports per ton.	Value of exports per ton.	Country.	Value of imports per ton.	Value of exports per ton.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
United Kingdom ..	22 6 1	27 1 6	Belgium.........	39 7 9	46 12 5
Victoria	1 16 6	1 10 9	France	3 17 1	11 12 10
Queensland......	11 11 3	3 10 9	Germany	9 12 8	7 0 10
South Australia	1 17 7	1 8 11	United States..	14 2 8	7 18 5
Tasmania	2 18 4	2 11 10	Other Foreign countries......	4 2 0	10 13 5
New Zealand ...	5 8 10	1 9 0	Average.........	7 9 3	6 0 6
Other British Possessions...	4 14 5	3 1 1			

Trade with various countries compared.

During 1891 the proportion of tonnage arriving in ballast from Victoria was 44 per cent., and from South Australia 28 per cent., of the arrivals from those two Colonies, and this circumstance partly explains the low rate per ton. As for the outward trade the large quantity of coal shipped to the Southern Colonies lowers the general average value of the whole exports, while in the case of New Zealand the low value of the exports per ton is due to the departures in ballast, which were very numerous in 1891. This will, in part, explain the disparity between the two branches of the trade.

The following table shows the yearly movements of tonnage of some of the principal nations of the world, and also of New South Wales, with the rate of tonnage per head of the population, the returns being made up to the latest date available:—

Country.	Tonnage.	Per Head of Population.	Country.	Tonnage.	Per Head of Population.
United Kingdom ..	166,834,742	4·4	Italy	13,871,704	0·4
France............	27,377,295	0·7	Spain	24,286,422	1·4
Germany...... ...	20,472,416	0·4	United States..	26,983,313	0·4
Norway	5,334,470	2·7	Arg'ntine Republic	12,554,658	3·6
Sweden	10,430,594	2·2	Canada	10,328,285	2·1
Netherlands ...	10,365,587	2·3	New South Wales	5,694,236	4·9

Exports to the United Kingdom.

Of the tonnage engaged in the outward trade of the Colony 11·4 per cent. was to the United Kingdom, though in value the exports were 51·1 per cent. of the total. The exports by sea to Victoria and the other Australasian Colonies amounted to 54·8 per cent. of the whole, while in value they reached only 17·2 per cent. As regards the other British possessions, the tonnage of vessels carrying goods from New South Wales to their ports amounted to 6·6 per cent. of the whole, but the value only reached 3·5 per cent. In the case of Foreign Countries, the tonnage in 1891 amounted to 27·2 per cent. and the value to 28·2 per cent., the great increase over last year's figures being due to the expansion of the direct trade in wool with European Continental countries. The following table shows the tonnage inward and outward from Great Britain and the Colonies, and to some of the principal Foreign Countries, as well as the value of the cargoes; but it must be borne in mind that the tonnage figures represent the nominal tonnage of the vessels carrying the goods, and not the actual weight of the goods themselves, which latter information it is impossible to obtain:—

Tonnage of Vessels and Value of Cargoes during 1891.

Country.	Inwards.				Outwards.			
	Tonnage.		Value.		Tonnage.		Value.	
	Total.	Per cent.	Total.	Per cent.	Total.	Per cent.	Total.	Per cent.
	Tons.		£		Tons.		£	
United Kingdom	474,353	16·8	10,580,230	50·2	327,058	11·4	8,855,465	51·1
Victoria........	947,116	33·6	1,730,923	8·2	814,486	28·3	1,259,444	7·2
Queensland	276,685	9·8	3,199,838	15·2	235,178	8·2	832,167	4·9
South Australia	329,192	11·7	619,278	2·9	216,660	7·5	313,571	1·8
Western Australia	5,073	·2	9,339	·4	21,726	·8	35,345	·2
Tasmania	129,234	4·6	377,174	1·8	97,307	3·4	252,356	1·5
New Zealand ..	160,135	5·7	871,422	4·1	189,484	6·6	280,039	1·6
Other British Possessions.	159,360	5·6	766,947	3·3	188,696	6·6	607,971	3·5
Belgium	4,780	·1	188,277	·9	22,293	·8	1,039,333	6·0
France	31,197	1·1	120,321	·6	42,139	1·4	480,599	2·8
Germany	80,228	2·8	773,016	3·7	62,141	2·2	437,522	2·5
United States ..	90,363	3·2	1,277,032	6·1	292,104	10·2	2,313,671	13·4
Other Foreign Countries.	134,182	4·8	550,396	2·6	363,066	12·6	606,289	3·5
Total	2,821,898	100·0	21,064,193	100·0	2,872,338	100·0	17,313,772	100·0

Average tonnage of vessels trading with N.S. Wales.

The average tonnage of vessels trading with the Colony has gradually increased since 1845; previously to that year transports formed so large a portion of the total tonnage as to swell the average considerably. The average tonnage per ship at each decennial period since 1825 was as follows :—

Year.	Average tonnage of vessels.	Year.	Average tonnage of vessels.
1825	295	1865	329
1835	246	1875	463
1845	173	1885	797
1855	306	1891	930

Tonnage of British, Colonial and Foreign vessels.

Since 1870 the average tonnage of British and British-Colonial vessels trading to New South Wales has increased by 138 per cent. in the one case, and 132 per cent. in the other, while Foreign vessels have increased in average tonnage by 181 per cent. during the same period. The advance during the last decade has been very marked, as the following figures attest :—

Average Tonnage of Vessels Inwards.

Year.	British.	Colonial.	Foreign.	Year.	British.	Colonial.	Foreign.
1870	706	306	449	1885	1,312	602	997
1875	742	379	557	1886	1,329	600	986
1880	1,031	476	732	1887	1,385	549	1,108
1881	1,105	498	780	1888	1,516	576	1,194
1882	1,067	533	787	1889	1,534	600	1,123
1883	1,060	594	982	1890	1,624	600	1,330
1884	1,146	611	973	1891	1,680	709	1,263

Decrease in hands required per ton.

Average crews carried.

The natural corollary to the increase in the size of ships and the improvements to the rigging and fittings is the decrease in the number of hands required per ton, though the actual number of hands employed per vessel has increased. Intercolonial vessels in 1891 carried an average of 25 men to every vessel, or 1 man to every 28·6 tons. British vessels carried in 1891 an average complement of 51 men, or 1 man to every 32·5 tons, while foreign ships carried an average crew of 41 men, or 1 man to every 30·5 tons. In 1870 British ships carried 1 man to every 26 tons, intercolonial vessels 1 man to every 20 tons, and foreign vessels 1 man to 35 tons, the decrease in the tonnage per sailor in foreign vessels being due to the finer class of ships that began to trade here in 1883, which are fitted in the most modern fashion, and manned accordingly :—

Average crews of vessels inwards.

Year.	British.	Colonial.	Foreign.	Year.	British.	Colonial.	Foreign.
1870	27	15	13	1885	44	24	36
1875	27	17	14	1886	45	23	39
1880	44	21	25	1887	48	22	49
1881	40	22	23	1888	45	23	44
1882	35	22	18	1889	46	22	40
1883	37	24	38	1890	52	22	49
1884	41	25	36	1891	51	25	41

Comparison of Australian ports

The relative importance of the various ports of Australia may be ascertained by an inspection of the following table, from which the rank of Sydney becomes evident. Melbourne takes the first place; but, as hereafter pointed out, its trade, for purposes of comparison, should be reduced by a large amount to allow for the circumstance that the great ocean steamers whose terminal port is Sydney are counted in the homeward and outward voyages as twice entering and twice clearing at Port Phillip; but even with this allowance the shipping of Melbourne probably exceeds that of Sydney. Port Adelaide comes next after Sydney, exceeding in tonnage both Newcastle and Brisbane. It should be noted in respect to Queensland ports, that the tonnage of vessels is recorded at every port of call, and on this account the towns north of Brisbane also appear more important than they really are.

Tonnage of principal Australasian Ports, 1891.

Colony.	Port.	Entered.	Cleared.
		Tons.	Tons.
New South Wales	Sydney	1,934,556	1,535,306
	Newcastle	704,306	1,140,536
Victoria	Melbourne	2,222,805	2,139,333
Queensland	Brisbane	428,435	427,558
	Townsville	282,252	262,218
South Australia	Port Adelaide	1,025,820	965,118
	Port Pirie	153,560	168,221
Western Australia	Albany	464,134	467,368
Tasmania	Hobart	322,501	324,182
	Launceston	144,205	149,332
New Zealand	Wellington	154,952	138,499
	Auckland	181,999	163,184

Increase of Sydney trade.

The progress of the shipping trade of Sydney has been very uniform, the increase from the year 1860 being at an average rate of about 6 per cent. per annum. The vessels registered as entering the port of Sydney considerably exceed in tonnage those clearing. To account for this difference it is only necessary to state that vessels leaving Sydney for Newcastle for the purpose of shipping coal are reckoned as departures from Newcastle, and not from Sydney. For this reason the clearances of Newcastle uniformly exceed the arrivals, as will be noticed in the subsequent table. The practice of clearing vessels at both ports at one time obtained, but has been abandoned for many years, and vessels are now cleared at the port which they last leave. The following statement shows the shipping entered and cleared at both Sydney and Newcastle for quinquennial periods from 1870 to 1885 and consecutive years after the latter date. It will be seen that the tonnage of the first-named port has increased twofold during every ten years.

Tonnage Entered and Cleared at Sydney and Newcastle.

Year	Sydney.		Newcastle.	
	Entered.	Cleared.	Entered.	Cleared.
	Tons.	Tons.	Tons.	Tons.
1870	385,616	364,758	283,091	383,242
1875	590,700	468,423	510,902	573,626
1880	827,738	641,996	400,598	516,480
1885	1,608,169	1,283,888	452,946	722,865
1886	1,638,802	1,399,545	416,518	686,179
1887	1,483,045	1,303,488	566,702	780,588
1888	1,692,268	1,424,429	633,119	815,516
1889	1,759,658	1,432,340	744,113	1,126,892
1890	1,644,589	1,356,632	625,398	842,180
1891	1,934,556	1,535,306	704,306	1,140,536

The effects of the strike of 1890 are apparent when the returns of that year are compared with those of 1891 or of 1889. The trade of the northern port seems to have suffered most, if judged by the reduced tonnage.

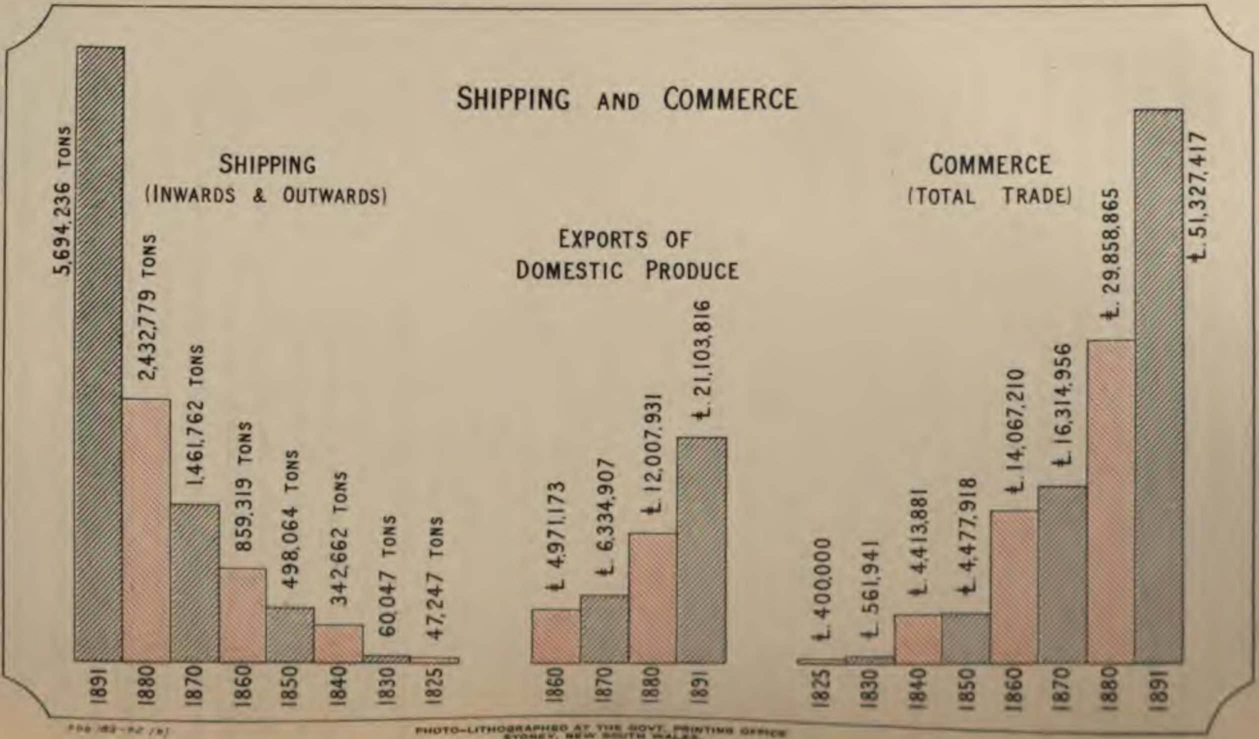
Trade of Sydney compared with British ports.

The comparative importance of the trade of Sydney may be seen from viewing it in connection with the trade of the chief ports of the United Kingdom. It will be observed that in absolute tonnage Sydney was surpassed by only five English ports—London, Liverpool, Cardiff, Newcastle, and Hull; though in point of value, the trade of Sydney exceeded that of any port in Great Britain—London, Liverpool, and Hull excepted. Thirteen of the most important ports of the United Kingdom are shown in the following table. The figures are in every instance those for 1891.

Tonnage and Trade of Principal Ports of the United Kingdom and of New South Wales, 1891.

Port.	Inwards.		Outwards.	
	Tons.	Trade.	Tons.	Trade.
England—				
London	7,637,965	£149,473,286	5,787,552	£87,120,948
Liverpool	5,866,920	115,143,246	5,220,988	108,118,237
Cardiff	3,425,891	2,739,267	5,960,444	8,079,363
Newcastle	1,932,199	6,759,145	3,351,423	4,811,802
Hull	2,087,871	26,320,253	1,725,805	21,011,214
Newport	736,145	606,481	1,101,318	1,644,466
Southampton	918,068	8,718,217	833,508	8,282,902
Scotland—				
Glasgow	995,385	12,555,658	1,661,672	14,459,866
Leith	778,978	10,245,567	666,602	3,850,750
Kirkcaldy	434,699	202,546	740,305	676,488
Grangemouth	514,145	1,908,788	674,737	1,184,680
Ireland—				
Belfast	248,048	3,163,464	81,179	98,515
Dublin	228,788	2,781,787	79,160	147,685
New South Wales—				
Sydney	1,934,556	20,176,364	1,535,306	15,201,381
Newcastle	704,306	877,063	1,140,536	2,032,522

No other seaport of the Colony can be compared with either Sydney or Newcastle, though for some time Wollongong has maintained a trade of some consequence, especially in coal; and of late years the importance of Eden, Twofold Bay, has steadily increased. In point of tonnage the latter port ranks next to Newcastle, but if the value of trade be considered the trade of Wollongong largely exceeds that of Eden.



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SYDNEY, NEW SOUTH WALES.

Murray and Darling trade.

The trade borne by the Rivers Murray and Darling varies greatly from year to year, according as they are favourable or otherwise for navigation. The Murray River is navigable during the greater part of each year, but the same cannot be said of the Darling, which as a rule can only be used by shipping during the period from March to September, when its volume is augmented by the flood waters from the interior of Queensland. For the period over which the records extend both rivers have been navigable, and the tonnage at Wentworth on the Darling, at its confluence with the Murray, and at Moama and other Murray River ports, is given in the following table :—

Trade at Riverina Ports.

Year.	Tonnage Inwards at—	
	Wentworth.	Moama and other Murray Ports.
1886	25,366	17,432
1887	35,392	30,470
1888	22,427	28,339
1889	38,335	29,279
1890	42,637	30,140
1891	37,988	31,753

Number of vessels registered.

During the year 1891, 856 steamers and sailing vessels, representing 102,047 tons net, stood registered in the books of the Custom House, as belonging to the port of Sydney. Of these 413 were steamers, collectively of 48,228 tons net and of 17,077 nominal horse-power. There were 58 sailing vessels registered at Newcastle (8,347 tons net), and 54 steamers of 1,956 nominal horse-power, and 3,222 net tons. The total tonnage registered in the Colony was 113,616, of which 51,450 was steam tonnage, with 19,033 nominal horse-power.

The total tonnage registered in New South Wales for the years shown was :—

Vessels Registered in New South Wales.

Year.	Sailing vessels.			Steamers.			Total.		
	No.	Tons.	Men.	No.	Tons.	Men.	Vessels.	Tons.	Men.
1870	50	8,349	380	14	1,494	89	64	9,843	469
1875	93	12,197	556	37	3,903	286	130	16,100	842
1880	54	7,003	325	20	2,159	168	74	9,162	493
1885	49	4,876	280	50	6,387	394	99	11,263	674
1886	45	5,969	166	47	3,489	235	92	9,458	401
1887	39	9,138	258	36	10,303	603	75	19,441	861
1888	25	5,101	164	25	2,357	237	50	7,458	401
1889	18	1,038	53	20	2,381	144	38	3,419	197
1890	28	6,234	191	21	4,027	278	49	10,261	469
1891	53	9,492	280	40	5,239	351	93	14,731	631

Import of vessels.

No reliable data have as yet been procurable as to the number and tonnage of vessels built abroad for the New South Wales local trade, but that number must be considerable, and forms an import of large value altogether lost sight of in the Customs returns. Some idea, however, of the large number of vessels imported may be gathered from the tonnage registered, which will be found in the following table. In estimating the value of the vessels imported, approximate figures can alone be given. The value per ton of the British mercantile fleet averages about £30 for steamers and £15 for sailing vessels, but in this Colony th figures would be somewhat lower, and for the purpose of th estimate which follows, the average value of steam tonnage h been taken at £25, and sailing vessels at £12 10s.:—

Foreign Tonnage Registered in New South Wales.

Year.	Sailing.	Steam.	Value.	Year.	Sailing.	Steam.	Value.
	Tons.	Tons.	£		Tons.	Tons.	£
1870	7,328	1,092	120,150	1887	8,502	9,525	356,900
1875	7,573	2,087	146,837	1888	4,797	1,963	109,137
1880	5,065	1,298	95,762	1889	834	1,718	42,950
1885	4,076	3,395	135,825	1890	5,820	3,330	156,000
1886	4,630	852	79,175	1891	8,919	4,472	223,287

Shipbuilding record.

The building of steam vessels has become of more importance than that of sailing ships, the tonnage during the last ten years being 22,717 of steam tonnage, and 10,111 tons of sailing, respectively. Schooners and ketches are the principal classes of sailing vessels built in the Colony, the general tonnage of each class averaging somewhat under 100 tons burden. The general tendency to supplant sailing vessels by steamers, and the substitution of iron for wood for the frames and hulls of vessels, have given a check to the wooden ship-building industry, which at one time promised to grow to important dimensions. Every kind of timber suitable for the construction of ships is found on the rivers of the coast districts of New South Wales, but, as the demand for this description of vessel has not increased, little advantage can be taken of the resources of the Colony in this respect.

Tendency to supplant sail by steam.

Vessels built in the Colony.

The years 1883 and 1884 were marked by great activity in the construction both of sailing and steam vessels, 50 sailing and 52 steam vessels, valued at about £157,762, having beer built in 1883, whilst 39 sailing vessels and 64 steamers, valued at £160,100, were built in the subsequent year. Trade has not been so active since, and the industry shows a tendency to die out, as in 1888 it had fallen lower than in any of the preceding years and there has been little improvement since, the value of sailing vessels built during 1891 being only £7,162, and of steamers £19,175, in all £26,337. The number of vessels built for each of the years shown was :—

Vessels Built in New South Wales.

Year.	Sailing vessels.		Steamers.		Total.	
	No.	Tons.	No.	Tons.	Vessels.	Tonnage.
1880	29	1,938	12	861	41	2,799
1885	29	800	36	2,992	65	3,792
1886	27	1,339	40	2,637	67	3,976
1887	14	636	16	778	30	1,414
1888	9	304	11	394	20	698
1889	9	204	14	663	23	867
1890	9	394	6	697	15	1,091
1891	27	573	13	767	40	1,340

Dock accommodation in Sydney.

The accommodation provided both by the Government and by private enterprise for the fitting and repairing of ships, is equal to the requirements of the trade of the Colony. At Sydney there are three graving docks, four floating docks, and five patent slips. At Newcastle there is one patent slip, and on the Clarence River a floating dock, besides which there are other docking and building yards in different parts of the Colony for the convenience of coasters and small craft. The principal docks and slips in Sydney, as well as their leading dimensions and size of vessel they will carry, are shown in the following table:—

Docks and Slips in Sydney Harbour, 1892.

Name of Dock.	Where situated.	Length of Keel.	Breadth	Draught of vessel taken.	Lifting power of patent slip or dock.
Graving docks—		ft.	ft.	ft. in.	tons.
Fitzroy (Government)..	Cockatoo Island ...	475	59	20 0	...
Sutherland „ ...	„ ...	635	84	32 0	...
Mort's	Balmain	410	66	20 6	...
Floating docks—					
Drake's.....................	Johnston's Bay ...	150	61	8 0	300
Goodall's	„ ...	109	26	7 3	...
Rountree's	Mort's Bay	160	42	12 0	474
Atlas Company's........	Woolwich	242	59	14 0	1,200
Victoria Jubilee.........	Mort's Bay	317	55	23 0	...
Patent slips—					
Davy and Sands'.........	Pyrmont	180	...	...	600
Mort's No. 1	Balmain	270	...	...	2,000
„ „ 2	„	200	...	...	1,000
„ „ 3	„	...	...	...	40

New graving dock.

All the necessary tools and appliances for the repairing of ships = found in the dockyards. The new graving dock recently npleted by the Government is the largest single dock in the rld, and capable of receiving vessels drawing 32 feet of water.

Wharfage, Sydney.

For natural facilities for shipping Sydney stands unrivalled. The ter deepens abruptly from the shores, so that the largest vessels y be berthed alongside the wharves and quays. The Govern- nt hold the shores of Sydney Cove, along the margin of which gnificent echelon wharves have been constructed, which are able of berthing vessels of 7,000 tons register. The average oth of water is not less than 30 feet, and the wharves have an ilable frontage of 5,620 feet. The south and west sides of rling Harbour and Cowper Wharf at Woolloomooloo Bay are o in the hands of the State; at the former there are two ties, with the railway line laid thereon to the water's edge. ey are also fitted with steam cranes and other appliances fit for speedy discharge of the largest ships constructed. The pliances for handling coal consist of three steam cranes of een tons each on the north side of Pyrmont Bridge. With se, 3,000 tons can be shipped per diem, and by working at ht the quantity could be increased to 6,000 tons. There are 10 feet of berthing space here. On the south side of the bridge re is one steam crane of 25 tons not used for coal, and there is berthing space of 2,410 feet. The wharves at Woolloomooloo y also contain excellent accommodation for large vessels. bout one-half the total wharf frontage belongs to the State, ilst the remainder is in the hands of companies and private dividuals. The wharfage frontage in Port Jackson belonging the Government is about 17,520 feet. Powerful shipping pliances, roomy stores, as well as electric lighting, are to be und on all the important wharves. The total frontage of the blic and private wharves amounts to about 7 miles.

Equipment of the Port of Newcastle.

Newcastle is also a well-equipped port, where vessels of 4,000 ns can be safely berthed; and every modern steam and hydraulic appliance for loading coal is found on its wharves. The Government owns nearly all the wharfage, which extends over a length of about 11,580 feet. The total length of the Bullock Island wharf is 7,760 feet, in addition to which there are four ballast jetties 50 feet long and 200 feet apart. 5,550 feet of the wharf is used for the shipment of coal. There are 12 hydraulic cranes of from 9 to 25 tons, and 3 steam cranes of 15 tons. The Newcastle wharf is 3,220 feet long, of which 2,130 feet is set apart for cargo berths for deep-draught vessels, 590 feet for timber and general cargo for light-draught vessels, and 500 feet for Sydney steamers. The wharf at Stockton is 600 feet long, with one 15-ton steam crane. 100 tons per hour, or 2,000 tons per day, is a good average per day for loading coal at the Bullock Island wharf, but steamers have been loaded at the rate of 135 tons per hour. By the port regulations, steamers are required to receive coal at the steam cranes at the rate of 500 tons per day, and at the rate of 600 tons at the hydraulic cranes. Sailing vessels are expected to receive at least 400 tons per day from the steam cranes, and 600 tons per day from the hydraulic cranes. There are also two slips owned by private individuals, capable of taking up vessels of 300 and 1,200 tons respectively. Staiths, cranes, and other coal-shipping appliances have been erected at Wollongong, Bulli, Coal Cliff, and other ports.

Private wharfs.

Private as well as Government wharfs are found at all the chief centres of population along the rivers of the Colony, and all ports with a trade of any importance have their jetties and shipping facilities.

Vessels wrecked during 1891.

The coast of New South Wales is free from any source of danger to vessels navigating it, and where reasonable precautions were taken wrecks have been very rare. The majority of losses have been amongst vessels under 100 tons burthen. During the year 1891 there were eighteen wrecks within the jurisdiction of New South Wales, with a total of 2,988 tons, valued with cargo at £28,830. No less than 47 lives were lost, out of 123 passengers and crew all told. Only one of the vessels lost was of any size—the "Tamarang" steamer, 1,281 tons—wrecked while on a voyage from Newcastle to Melbourne; the crew and passengers, numbering 32 souls, have never been heard of. The barque "Ellen," with a cargo of coals, foundered about 200 miles east of Seal Rocks; of a crew of nine only one was saved. The only other wrecks in which fatalities occurred were at the capsizing of the schooner "Helen Davis," at the Nambucca Heads, three lives being lost; and the foundering, off Jervis' Bay, of the "Prince Alfred," ketch, when four persons were drowned.

Vessels lost since 1880.

The following statement shows the number of vessels, which were lost on the coast of New South Wales during the years 1880–91:—

Vessels Wrecked off New South Wales.

Year.	Under 50 tons.	50 to 100.	100 to 200.	200 to 300.	300 to 400.	400 to 500.	Over 500 tons.	Total.	Lives lost.
1880	7	2	3	...	...	...	2	14	*
1881	6	1	1	3	1	...	1	13	*
1882	5	4	2	1	1	1	1	15	*
1883	2	6	3	1	...	...	...	12	*
1884	6	3	1	...	...	...	1	11	*
1885	3	4	1	1	1	...	1	11	*
1886	6	5	7	1	1	...	3	23	111
1887	4	5	2	1	...	...	1	13	2
1888	6	2	3	1	1	1	1	15	8
1889	4	8	5	2	...	...	1	20	4
1890	3	6	2	1	1	...	3	16	31
1891	3	10	3	...	...	1	1	18	47

*Not ascertained.

Average tonnage in port.

In the port of Sydney, in the year 1891, there was a daily average of 39,977 tons of sailing vessels, and 38,514 tons of steamers, or 78,491 tons in all, ranging from 124,205 on December 23rd to 36,331 on May 29th. At Newcastle the daily average was 33,082 tons, varying from 87,617 tons on January 2nd, to 10,791 tons on June 5th.

Tonnage in Port Jackson.

The following table shows the average daily tonnage, sailing and steam (exclusive of coasters), in Port Jackson during each month of the year 1890 :—

Average daily tonnage in Port Jackson, 1891.

Month.	Tonnage.		
	Sailing.	Steam.	Total.
January	33,520	44,595	78,115
February	34,660	44,006	78,666
March	27,494	35,958	63,452
April	27,557	34,867	62,424
May	25,985	22,605	48,590
June	38,508	23,278	61,786
July	38,252	38,278	76,530
August	41,129	40,927	82,056
September	46,857	38,624	85,481
October	48,872	48,709	97,581
November	48,370	52,380	100,750
December	50,967	55,489	106,456
Average for the year	38,514	39,977	78,491

Tonnage in Port Hunter.

In the case of the port of Newcastle the total average daily tonnage for every month in the year, taking sailing vessels and steamers together, was as follows :—

Average daily tonnage in Newcastle, 1891.

Month.	Tonnage.	Month.	Tonnage.
January	62,570	July	23,639
February	41,210	August	39,055
March	23,618	September	42,089
April	27,527	October	30,624
May	27,475	November	28,694
June	16,572	December	33,916

Average for the year, 33,082 tons.

Value of shipping.

The value of shipping afloat in Sydney Harbour varies, of course, with the season; but on one day—December 23rd—the estimated value was £2,950,000, and at Newcastle, on January 2nd, the estimated value of the shipping was £1,350,000.

COMMERCE.

Exports an index of production.

The value of goods imported into, and exported from, New South Wales, has increased during the sixty-six years over which the records extend, from £400,000 in 1825 to £51,327,417 in 1891. The yearly values have been somewhat uncertain in their increase, the imports from 1840 to 1852 being especially erratic; but of late years the progress of the Colony, as evidenced by its trade, has been remarkably steady. The gross value from year to year of the exports, for the reasons hereafter pointed out, forms the surer index of the progress of a country circumstanced like New South Wales, and the result of a rise or fall in the value of the staple commodities, or of a depression in production, may be readily traced in the corresponding rise or fall in the export values. The amount of the trade of the Colony, for the several periods shown was:—

Imports and Exports.

Year.	Imports.	Exports.	Total Trade.
	£	£	£
1825	300,000	100,000	400,000
1830	420,480	141,161	561,941
1840	3,014,189	1,399,692	4,413,881
1850	2,078,338	2,399,580	4,477,918
1860	7,755,859	6,311,351	14,067,210
1870	8,284,378	8,030,578	16,314,956
1880	14,176,063	15,682,802	29,858,865
1891	25,383,397	25,944,020	51,327,417

The following table shows the total value of the Imports and Exports of the Colony of New South Wales, from and to each Country, during the year 1891 :—

Total Trade with all countries.

Countries.	Total Imports therefrom.	Exports thereto.			Total Trade.
		Domestic Produce or Manufacture	Other Produce or Manufacture	Total.	
	£	£	£	£	£
United Kingdom..........	10,580,230	7,683,157	1,222,308	8,855,465	19,435,695
AUSTRALASIAN COLONIES.					
Victoria..................	2,818,935	5,113,489	330,174	5,443,663	8,262,598
Queensland	4,303,520	333,301	730,479	1,063,780	5,367,300
South Australia	2,746,788	4,322,219	205,768	4,527,987	7,274,775
Western Australia	9,339	22,286	13,059	35,345	44,684
Tasmania	377,174	97,287	155,069	252,356	629,530
New Zealand	871,422	162,000	118,039	280,039	1,151,461
Total Australasian Colonies	11,127,178	10,050,582	1,552,588	11,603,170	22,730,348
OTHER BRITISH POSSESSIONS					
Canadian Dominion	32,864	40	....	40	32,904
Ceylon	55,544	527	104	631	56,175
Fiji	89,859	27,079	76,694	103,773	193,632
Hong Kong	273,383	246,539	35,770	282,309	555,692
India	260,307	113,935	13,453	127,388	387,695
Singapore	44,061	53,964	682	54,646	98,707
Other British Possessions..	10,929	36,148	3,036	39,184	50,113
Total, other British Possessions.	766,947	478,232	129,739	607,971	1,374,918
FOREIGN COUNTRIES.					
Belgium..................	188,277	1,036,745	2,588	1,039,333	1,227,610
China	270,929	11,440	724	12,164	283,093
France	120,321	478,053	2,546	480,599	600,920
Germany	773,016	427,280	10,242	437,522	1,210,538
Italy	30,243	20,540	1,246	21,786	52,029
Japan	16,385	12,470	668	13,138	29,523
New Caledonia	48,378	50,954	134,814	185,768	234,146
South Sea Islands	42,902	10,048	59,359	69,407	112,309
United States	1,277,032	597,684	1,715,987	2,313,671	3,590,703
Other Foreign Countries .	141,559	296,631	7,395	304,026	445,585
Total, Foreign Countries	2,909,042	2,941,845	1,935,569	4,877,414	7,786,456
General Total	25,383,397	21,103,816	4,840,204	25,944,020	51,327,417

Of the total trade shown above, about three-fourths are seaborne, the remaining fourth comprises the overland trade with the three bordering Colonies of Queensland, South Australia, and Victoria. Nearly the whole of the seaward trade is monopolised by the ports of Sydney and Newcastle, the trade of the other seven ports amounting to little more than £90,000. The distribution of the overland trade is much more equal, as the table given below will illustrate. The value of the overland trade with Victoria during 1891 was £5,272,231; that with South Australia came to £6,341,926; and the Queensland overland trade was worth £1,335,295. Wool and live stock formed the bulk of this traffic with Victoria and Queensland, as it did until recent years with South Australia also, but since the development in 1886 of the mines in the Broken Hill district, the chief element of export has been silver, lead, and ore, and the imports general merchandise for Broken Hill. The following table shows the import and export business for 1891 at the different ports and border stations of the Colony. Some of the latter, it will be noticed, are situated at a considerable distance from the actual border; such, for instance, are Wilcannia and Bourke:—

Seaward and Overland Trade.

Port or Station.	Imports.	Exports.			Total Trade.
		New South Wales Produce.	British and Foreign Produce.	Total.	
	£	£	£	£	£
		BY SEA.			
Ballina	4	170	....	170	174
Bateman's Bay	....	585	....	585	585
Eden	2,768	20,079	379	20,458	23,226
Grafton	5,421	13,431	....	13,431	18,852
Newcastle	877,063	2,027,622	4,900	2,032,522	2,909,585
Port Macquarie	99	....	....	....	99
Sydney	20,176,364	10,657,267	4,544,114	15,201,381	35,377,745
Tweed River	2,474	100	262	362	2,836
Wollongong	....	44,863	....	44,863	44,863
Total by Sea	21,064,193	12,764,117	4,549,655	17,313,772	38,377,965

Seaward and Overland Trade—*continued.*

Port or Station.	Imports.	Exports.			Total Trade.
		New South Wales Produce.	British and Foreign Produce.	Total.	
OVERLAND.					
	£	£	£	£	£
Albury	431,754	1,571,160	41,997	1,613,157	2,044,911
Barringun	412,861	132	75,707	75,839	488,700
Boggabilla	56,115	35,154	....	35,154	91,269
Bourke	.. ..	3	21,620	21,623	21,623
Corowa	100,002	371,111	11,991	383,102	483,104
Euston	8,373	59,174	8,162	67,336	75,709
Howlong	30,645	43,951	74	44,025	74,670
Moama	390,239	712,591	7,066	719,657	1,109,896
Mulwala	27,440	58,773	50	58,823	86,263
Silverton	189,102	163,019	79,167	242,186	431,288
Swan Hill	9,622	937,990	....	937,990	947,612
Tocumwal	24,966	116,038	105	116,143	141,109
Wallangarra	137,721	81,965	6,617	88,582	226,303
Wentworth	267,771	645,259	6,617	651,876	919,647
Wilcannia	.. ..	....	543	543	543
Willyama	1,851,108	3,543,379	30,833	3,574,212	5,425,320
Other Stations (Live Stock)...	381,485	....	....	....	381,485
Total Overland	4,319,204	8,339,699	290,549	8,630,248	12,949,452
Total, Seaward and Overland	25,383,397	21,103,816	4,840,204	25,944,020	51,327,417

IMPORTS.

Increase in value of Imports.

During 1891 the gross value of goods imported into the Colony amounted to £25,383,397, or at the rate of £22 3s. 11d. per head; the imports for home consumption were valued at £20,543,193, or £17 19s. 3d. per head of the mean population during the year, thus showing an increase on the previous year of £2 3s. 5d. per head of gross imports, and of £1 16s. 2d. per head of net imports. The large increase over the previous year's return is not entirely, nor even largely, due to increased production, as the commerce of 1890 was greatly hampered by the maritime strike of that year, and part of the trade which would otherwise have been transacted in 1890 was held over till the beginning of the following year.

The value per inhabitant of the imports, distinguishing home consumption from the general total, was, for the years shown :—

Value of Imports per Inhabitant.

Year.	Imports for home consumption.	Total imports per head.	Year.	Imports for home consumption.	Total imports per head.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
1870	12 7 8	15 16 6	1887	14 16 4	19 1 7
1875	19 14 10	23 9 11	1888	15 6 1	20 9 11
1880	15 4 9	19 9 0	1889	15 18 8	21 8 9
1885	20 10 10	25 12 0	1890	16 3 1	20 0 6
1886	17 14 5	21 19 8	1891	17 19 3	22 3 11

Classification of imports.

For the purpose of more readily understanding the nature of the imports, they have been classified under certain leading heads, and during 1891 the value of each class of imports was :—

Classification.	Total Imports.	Imported for home consumption.
	£	£
Food and beverages, including breadstuffs	3,658,780	3,237,541
Wines, fermented and spirituous liquors	991,163	910,525
Livestock..	1,336,771	1,253,158
Animal and vegetable products, including wool	2,850,163	2,336,019
Clothing and textile fabrics..........................	5,740,362	5,328,753
Minerals and metals, raw or partly worked up...	2,283,858	1,985,685
Coal and coke	442,944	442,944
Specie and precious metals	2,503,222	53,049
Articles of education, art, amusement	1,259,975	1,085,913
Manufactured articles not elsewhere included...	3,979,359	3,683,976
Unclassified articles	336,600	225,630
Total value .... £	25,383,397	20,543,193

Import of coal and coke.

The import of coal and coke during 1891, amounting to £442,944, as shown above, consisted almost entirely of coke required for smelting purposes at Broken Hill, but it is quite possible that the item includes some New South Wales coal or coke that had been previously exported to South Australia.

Rate of imports per head.

During 1891 the Colony imported food and drink for its own consumption to the value of £4,148,066, or at the rate of £3 12s. 7d. for each inhabitant, and manufactured goods to the amount of £10,098,642, or at the rate of £8 16s. 7d. per head, both together representing £12 9s. 2d. per head, out of a total of £17 19s. 3d. The three principal items of the balance are live stock, animal and vegetable products, and minerals and metals, raw or partly worked up. Of the animal and vegetable products, as also of the minerals and metals, some portion is worked up in the Colony for local requirements, but the greater portion of the gold imported is treated at the Mint, and re-exported in the shape of coin. The value per head of some of the principal articles imported is given below:—

Value per head of principal articles imported for home consumption—1887–91.

Principal Articles.	1887.		1888.		1889.		1890.		1891.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Apparel—wearing	18	7	21	4	20	1	19	1	23	4
Beer	6	8	6	9	7	6	6	3	6	1
Boots and shoes	9	0	9	4	9	8	8	8	10	2
Drapery	37	4	45	9	37	8	37	1	46	9
Flour	9	9	9	5	11	6	6	11	10	5
Grain and pulse	5	9	10	1	16	3	6	4	7	9
Hardware	5	4	6	4	7	7	10	2	10	9
Iron and steel	11	8	19	1	14	3	16	3	23	6
Live stock	22	2	13	7	24	8	41	6	21	11
Machinery	5	10	5	8	7	1	7	9	8	1
Paper, books, &c.	6	2	7	0	5	10	6	2	6	11
Spirits	8	0	6	11	8	3	7	4	8	6
Sugar	7	5	8	2	15	0	12	6	9	10
Tea	7	1	7	3	6	7	6	7	7	7
Timber	7	2	9	7	7	7	7	1	12	8

Drapery and apparel.

The import of drapery stands first in the list of values, and if wearing apparel be added to it the value of these goods would represent a sum of £3 10s. 1d. per head during 1891, the greatest amount for any one year having been in 1882, when the value imported reached almost £5 for every inhabitant. The value per head of iron and steel, machinery and hardware combined, was

£2 2s. 4d.; wine and liquors, 15s. 11d.; flour, 10s. 5d.; grain and pulse, 7s. 9d.; boots and shoes, 10s. 2d.; sugar, 9s. 10d.; tea, 7s. 7d. None of the other values reach such large figures as those mentioned above except those for live stock and timber, the latter of which was much larger than that of the previous year, though many other articles form individually very important imports. Two things are plain from a consideration of this table—the great purchasing power of the people, and the very large scope that exists for the production of goods which are now imported, and for the extension of manufactures within the Colony. This will, perhaps, be seen more clearly from an inspection of the gross values of some of the principal articles imported during the year 1891, as given in the following table:—

Scope for manufactures proved by large imports.

Values of the Principal Imported Articles.

Apparel, wearing	£1,366,400
Arms and ammunition	128,456
Beer	370,094
Boots and shoes	640,298
Butter	67,363
Candles	96,493
Chaff and hay	238,088
Cement	204,290
Coke	373,167
Cutlery and grindery	128,902
Drapery	2,929,870
Drugs and apothecaries' ware	245,759
Fancy goods and toys	162,332
Fish, preserved	93,465
Flour	703,297
Fruit, bottled, dried, and green	335,809
Furniture and upholstery	194,357
Glass and glassware	108,246
Grain and pulse	457,345
Hardware	665,293
Iron and iron manufactures and machinery	2,999,724
Jams and jellies	66,810
Jewellery	60,275
Leather	106,465
Live Stock	£1,336,771
Malt and hops	165,141
Matches	61,567
Milk, condensed	66,052
Musical instruments	124,920
Oils—Mineral and vegetable	172,734
Paints, paperhanging, lampware	132,009
Paper, books, stationery, etc.	585,091
Pickles, sauces, and oilmen's stores	103,903
Potatoes and vegetables	187,433
Saddlery and harness and saddlers' ware	116,822
Silver plate and ware	84,482
Skins and hides	102,280
Spirits	531,701
Sugar	670,063
Tea	474,114
Timber	732,303
Tin, ore, and ingots	269,653
Tobacco and cigars	266,294
Watches and clocks	84,092
Wine	100,050

Value of imports since 1870.

The value of the imports into New South Wales, distinguished under the main countries of origin, for 1870 and subsequent periods, ending with 1891, was :—

Value of Imports.

Year.	United Kingdom.	Australasian Colonies.	Other British Possessions.	Foreign States.	Total.
	£	£	£	£	£
1870	3,200,706	3,677,927	573,462	832,283	8,284,378
1875	6,062,226	5,878,751	867,252	926,904	13,735,133
1880	6,536,661	5,945,788	539,334	1,154,280	14,176,063
1885	11,885,597	8,595,429	818,689	2,437,746	23,737,461
1886	10,445,980	8,082,198	624,893	2,160,056	21,313,127
1887	7,998,568	9,016,575	549,805	1,606,369	19,171,317
1888	9,212,981	9,085,567	736,224	2,194,505	21,229,277
1889	8,736,478	10,647,312	814,718	2,664,549	22,863,057
1890	8,628,007	10,981,721	663,325	2,341,951	22,615,004
1891	10,580,230	11,127,178	766,947	2,909,042	25,383,397

EXPORTS.

New South Wales exports larger than other colonies.

The export trade of New South Wales, like the import, is larger than that of any other Australasian colony, both in regard to the total value and the value per head of population. Compared with the imports generally, the exports, for the reasons which will hereafter appear, usually fall considerably short, but 1891 was an exception to the rule, for the exports exceeded the imports by £560,623. Compared with those of other colonies, the extent of the New South Wales exports of home produce is very satisfactory, as will be seen by a glance at the subsequent table which shows that for the year 1891 the export trade of domestic produce of the Australasian Colonies was :—

Domestic Produce Exported.

	£
New South Wales	21,103,816
Victoria	13,026,426
Queensland	7,978,222
South Australia	4,685,313
Western Australia	799,466
Tasmania	1,367,927
New Zealand	9,400,094
Total Australasia	£58,361,264

Large re-export trade of certain colonies.

There is a defect in the figures, as far, at least, as two of these colonies are concerned. Victoria and South Australia have each a large re-export trade, especially in raw produce, and it frequently happens that credit is taken for the produce of other colonies in the returns showing the export of home produce. New South Wales was formerly over-credited with the gold received from Queensland for coinage, and is still, to some extent, with regard to tin and copper from Queensland and South Australia, and cattle from Queensland. To what extent the Customs value of home produce is overstated in Victoria and South Australia is unknown, but much of the New South Wales produce passing through Victoria for shipment to England is exported as Victorian produce, especially the wool, of which large quantities shipped from Victoria as home produce is really the production of New South Wales. How far this system obtains in other directions it is impossible to say.

Preponderance of domestic products in exports.

Dividing the exports of New South Wales into two classes—those which are the produce and manufacture of the Colony, and those imported from other countries,—the preponderance of home produce exported is very marked. The value of the domestic exports of 1891 was more than three-fold that of 1870, and, speaking generally, the expansion has been of a steady character. Wool constitutes the largest item of domestic export, and any fluctuation in the production or market value of the staple is plainly marked in the whole trade. The decline in the value of domestic exports between 1880 and 1886, which the following table shows, is to a great extent due to the fall in the price of wool, and to the losses sustained by reason of dry seasons. The exports of produce other than that of the Colony have also shown a decline since 1883, a circumstance to a large extent to be ascribed to the same causes, the decline being very noticeable in the value of wool and tin re-exported:—

Domestic and Foreign Produce Exported.

Year.	Domestic produce exported.	Other produce exported.	Total exports.
	£	£	£
1870	6,334,907	1,695,671	8,030,578
1875	11,471,896	2,325,501	13,797,397
1880	12,007,931	3,674,871	15,682,802
1885	12,059,280	4,690,827	16,750,107
1886	11,583,229	4,134,708	15,717,937
1887	14,240,362	4,281,438	18,521,750
1888	15,544,875	5,375,255	20,920,130
1889	17,423,311	5,871,623	23,294,934
1890	17,232,725	4,813,212	22,045,937
1891	21,103,816	4,840,204	25,944,020

Domestic produce in 1891.

The value of New South Wales produce exported during 1891 largely exceeded that of any of the former years, but, as previously shown, a portion of the trade would have been transacted in the previous year if the maritime strike had not occurred, and notwithstanding the increase due to this circumstance, the value of the domestic export per inhabitant was less than in 1883, and some years prior to that date. In 1883 the export of domestic produce per inhabitant was £18 15s. 10d. declining in 1886 to £11 19s., or 36 per cent., but rising again to £18 9s. 1d. in 1891. The falling off of the trade per inhabitant is largely due to the decline in the prices of the great staples—wool, coal, tin, and copper. The value of exports of each class per head for 1870, and subsequent periods to the end of 1891, was :—

Value of Exports per head.

Year.	Domestic produce exported.	Other produce exported.	Year.	Domestic produce exported.	Other produce exported.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
1870	12 18 6	3 9 2	1887	14 3 5	4 5 3
1875	19 12 6	3 19 7	1888	15 0 2	5 3 10
1880	16 9 7	5 0 10	1889	16 6 9	5 10 1
1885	13 0 1	5 1 2	1890	15 12 9	4 7 5
1886	11 19 0	4 5 3	1891	18 9 1	4 4 8

WOOL.

Wool the staple export.

Wool is the staple export of the Colony, and comprises considerably more than half the value of the domestic exports. The quantities and values of the wool exported for several periods commencing with 1870 are given in the next table, and from the figures it will be readily seen how greatly the Colony depends for its prosperity upon the produce of its flocks. The weights given represent the actual exports, washed and greasy wool being taken together :—

New South Wales Wool Exported.

Year.	Weight.	Value.	Year.	Weight.	Value.
	lb.	£		lb.	£
1870	47,440,610	2,741,141	1887	216,450,342	8,911,155
1875	87,534,280	5,651,643	1888	235,848,944	9,089,776
1880	154,871,832	8,040,625	1889	261,853,484	10,620,636
1885	168,151,659	7,246,642	1890	236,322,828	8,991,396
1886	173,985,640	7,028,596	1891	331,887,720	11,036,018

Re-export of wool.

Besides the wool grown in the Colony there has been a large re-export of other wool, chiefly from Queensland. In 1885 the export of foreign wool amounted to slightly more than 10,000,000 lb. weight, valued at £431,605; since then the quantity has fallen very largely. The exports, as returned by the Customs, are given herewith; but the quantities fall short of the actual amount, as not a little wool, the produce of other places, was exported in past years as New South Wales wool, on the same principle, probably, that led to the shipment in 1891 from Melbourne, as the produce of Victoria, of nearly 77,670,000 lb. weight of wool, the bulk of which was grown in New South Wales:—

Wool Exported—not the produce of the Colony.

Year.	Weight.	Value.	Year.	Weight.	Value.
	lb.	£		lb.	£
1880	7,614,490	431,605	1886	4,664,971	173,380
1881	7,582,181	396,909	1887	7,844,867	288,916
1882	7,130,162	381,005	1888	7,407,309	268,739
1883	8,878,422	340,613	1889	4,375,545	164,434
1884	9,030,215	537,483	1890	7,415,438	241,276
1885	10,221,766	429,399	1891	8,803,662	276,962

Severe seasons have affected wool trade.

The severe seasons experienced during the past few years have very materially interfered with the production, and consequently with the exportation, of wool; but the splendid season of 1886–7 was attended with a considerable increase in this staple export, and this improvement has been continued. The wool export of 1891, both as regards value and quantity, was the highest ever attained, the increase over the previous year being 95,563,892 lb., valued at £2,034,622. A large portion of this advance, however, was not due to an increased production, but to the circumstance that in 1890 the growers were unable to get part of their produce to market by reason of the general strike to which reference has already been made.

Tendency to export wool in grease.

There was formerly a disposition to export washed wool. The tendency is now, however, towards the export of wool in grease, except where the conditions as to carriage, &c., are exceptional. Further reference to the wool trade will be found in the chapter relating to pastoral pursuits.

Other exports.

The other animal products—tallow, skins, leather, and such-like—form together an export of considerable value, though, owing to the large local demand, it is not probable that there will be any material increase in the quantity of these articles exported.

Coal.

Coal, also, forms one of the staple exports of New South Wales, having been exported to the value of £1,306,630 in 1891. The development of the coal trade of the Colony has been traced in the chapter on Mines and Minerals, and it will be seen that this product has been subject to less fluctuation than any other item of export.

Silver.

The export of silver and silver-lead ore has become important since 1884, the figures for the past year amounting to £3,619,589. The export of locally produced copper and tin revived somewhat during 1888, but fell off very considerably since. Copper was exported in 1891 to the value of £205,093, and tin to the extent of £271,412. These figures are from the returns of the Customs Department, but the amounts are swollen by imports of ore from other Australasian Colonies, particularly from Queensland and South Australia, sent to be refined in this Colony. The actual local production of copper and tin during 1891 may be set down as £119,195 and £133,963 respectively. The trade in these metals is still very much below that of 1884 and previous years.

Bullion and specie.

Gold bullion and specie form one of the most important exports of the Colony. The export during 1870 and subsequent periods was :—

	£		£
1870	1,824,524	1887	1,318,917
1875	2,106,074	1888	2,122,337
1880	863,012	1889	3,211,747
1885	1,461,478	1890	2,289,022
1886	1,619,278	1891	3,732,894

Taken by itself, the foregoing statement might seem to favour the opinion sometimes hazarded that the Colony is being denuded of its gold. Such is not the case. The gold shipped is chiefly the produce of other colonies, sent to Sydney to be minted. The amount of gold raised in the Colony during 1891 was valued at £558,306, of which bullion to the value of £124,964 was exported, so that out of the large amount annually exported, only a limited quantity can be the production of the Colony.

Exports of domestic produce

Divided into the classes adopted for the imports, the exports of home produce in 1891 appear as follows :—

	£
Food and beverages, including breadstuffs	486,798
Wine, fermented and spirituous liquor	21,077
Live stock	1,478,803
Animal and vegetable products, including wool	12,126,357
Clothing and textile fabrics	12,671
Minerals and metals, raw or partly worked up, not including coal, coin, and bullion	605,501
Coal and coke	1,313,861
Specie and precious metals, including silver ore	4,923,381
Articles of education, art, and amusement	58,026
Manufactured articles not included elsewhere	57,809
Unclassified articles	19,532
Total	21,103,816

Raw materials largest export.

By far the larger portion of the exports consists of raw materials. As an export manufacturing country New South Wales has not yet achieved any position; and, though its manufactures are not without their importance, as will hereafter appear, its own markets furnish so wide a scope for manufacturing industry as to make it improbable that there will be any great development of export trade in home manufactures in the immediate future. So many channels have been presented for the successful employment of capital that little attention has been bestowed upon the possibility of New South Wales supplying other countries with its own manufactures; but as these outlets of capital are closed, the vast possibilities of the country in other directions will doubtless be recognised. The following table has been prepared with the view of showing the relative importance, and the value per head

Chief articles exported.

of population, of each of the principal articles exported. The preponderance of raw material, and raw material advanced one stage towards the finished manufacture, will be apparent:—

Value per Head of Principal Articles Exported, declared to be the Produce of New South Wales, 1887–91.

Articles.	1887.		1888.		1889.		1890.		1891.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Coal and coke	19	3	21	0	25	0	18	3	23	0
Copper (net export)	2	4	4	9	2	4	1	6	2	1
Flour	0	5	0	11	1	5	1	0	0	7
Fruit	2	11	2	6	2	8	2	6	2	3
Grain and pulse	1	7	1	6	1	6	0	8	1	0
Leather	1	10	2	3	2	11	2	3	2	5
Live stock	28	1	34	10	20	11	39	2	25	10
Meat	3	10	2	6	1	10	2	10	3	6
Shale (kerosene)	1	3	1	0	1	1	1	11	1	9
Silver and ore	11	9	22	1	36	11	50	2	63	4
Skins	5	9	6	7	7	2	5	4	8	6
Tallow	4	10	4	0	3	8	4	10	5	4
Timber	1	8	2	4	2	0	1	4	0	10
Tin (net export)	6	3	6	0	3	11	3	3	2	4
Wool	177	4	175	6	199	2	163	2	193	0

Home produce exported.

The values of some of the principal articles of home produce exported, during 1891, including those mentioned above, were as follows:—

Export of Domestic Produce.

	£		£
Coal and coke	1,313,861	Meat	199,163
Copper (net export)	119,195	Shale (kerosene)	101,288
Flour	32,971	Silver and ore	3,619,589
Fruit	130,703	Skins	487,177
Gold (bullion)	124,964	Tallow	304,599
Grain and pulse	57,903	Timber	47,571
Leather	137,293	Tin (net export)	133,963
Live stock	1,478,803	Wool	11,036,018

Trade in live stock.

The number and value of the live stock exported have varied considerably from year to year, being affected greatly by the seasons experienced both in this and the neighbouring colonies.

Import and export of horses.

The export of horses has increased both in number and value; and the same may be said as regards the imports, though it should be borne in mind that the figures in respect to horses are to some extent misleading, as the number of thoroughbred racing animals passing backwards and forwards between Sydney and Melbourne, which are entered as exports and imports, gives more importance to the trade than its magnitude really warrants.

Export and import of cattle and sheep.

The export of horned cattle in 1891 amounted to 129,323 head, valued at £654,725, and the import, 237,463, valued at £830,068. The export of sheep for the year was 1,596,916, worth £651,232; and the imports were 663,044 in number, and in value, £328,012.

Returns of stock misleading.

But, as in the case of horses, the figures for the export and import of other live stock are to a certain extent misleading, inasmuch as the returns are swollen by the inclusion of stock sent from one colony to another, in the hope of obtaining better pasturage, or for fattening or breeding purposes. The general tendency of the trade, however, can be gathered from the table below. The total trade in live stock during 1891 was:—

Trade in live stock.

Trade in Live Stock.

Live stock.	Imported.		Exported.	
	Number.	Value.	Number.	Value.
		£		£
Horses	8,253	165,290	4,280	163,814
Horned cattle.........	237,463	830,068	139,995	725,027
Sheep	663,044	328,012	1,615,964	662,333
Pigs	5,488	5,788	4,231	8,222
Other stock	....	7,613	....	2,122
Total	....	1,336,771	....	1,561,518

RE-EXPORT TRADE.

Re-export trade considerable.

The re-export trade of the Colony has increased considerably during the past decade, but has now reached a point beyond which it is not likely to advance for some years. The shipping facilities of Sydney have hitherto attracted to the port a large amount of trade from New Zealand, Queensland, and the South Seas, for transhipment to Europe; but the establishment of direct communication between these colonies and Europe has checked to some extent the expansion of the re-export trade, though it is not probable that it will fall below its present dimensions. The re-export overland trade is comparatively limited, amounting in 1891 to £290,549, out of a total £4,840,204.

Overland trade in foreign produce.

Value of re-exports.

The total value of the re-exports of the Colony during the periods mentioned was:—

Year.	Seaward.	Overland.	Total.
	£	£	£
1870	1,687,461	8,210	1,695,671
1875	2,195,646	4,038	2,199,684
1880	3,626,991	47,880	3,674,871
1885	4,525,883	164,944	4,690,827
1886	3,999,328	135,380	4,134,708
1887	4,120,184	161,254	4,281,438
1888	4,822,269	552,986	5,375,255
1889	5,499,370	372,253	5,871,623
1890	4,626,606	186,606	4,813,212
1891	4,549,655	290,549	4,840,204

Re-export trade has kept pace with increase of population.

It will be seen that the amount of re-exports has kept pace fairly with the increase of population, the greatest decline being during 1886 and 1887, which was due in all probability to the depression in trade experienced almost everywhere during those years. A revival took place in 1888 and 1889, which, however, was not continued in the following years, the rate per head of population for 1891 being lower than that of the bad seasons previously mentioned. The subsequent table, gives the value per head of foreign produce exported for 1870 and the periods stated :—

Value per Head of Foreign Produce Exported.

Year.	Value.	Year.	Value.
	£ s. d.		£ s. d.
1870	3 9 2	1887	4 5 3
1875	3 19 7	1888	5 3 10
1880	5 0 11	1889	5 10 1
1885	5 1 2	1890	4 7 5
1886	4 5 3	1891	4 4 8

Value per head of re-exports.

The following table shows the value per head of the principal articles exported during the last five years of British and Foreign Produce and Manufacture :—

Articles.	1887.	1888.	1889.	1890.	1891.
	s. d.	s. d.	s. d.	s. d.	s. d.
Apparel—wearing	0 5	0 7	0 5	0 9	0 7
Boots and shoes	1 8	1 2	1 4	1 4	1 0
Coin	25 7	40 5	40 7	39 7	42 5
Copra	0 6	0 10	0 10	1 2	0 11
Copper	1 4	2 7	1 9	1 1	0 10
Drapery	6 0	6 11	5 6	4 5	4 6
Flour	3 10	2 9	2 4	2 9	1 10
Hardware	1 11	1 11	1 4	1 1	0 10
Live stock	1 2	2 4	1 1	1 2	1 6
Machinery	1 1	1 5	1 7	1 6	1 5
Paper, books, &c.	1 0	1 1	1 1	1 0	0 10
Spirits	1 6	1 5	1 0	1 2	0 9
Sugar	2 2	0 10	1 8	1 7	1 10
Tea	0 6	0 7	0 8	0 8	0 9
Tobacco	1 3	1 4	1 5	1 2	1 0

Principal re-exports.

Amongst raw materials the principal articles re-exported are copper, tin, and wool; the manufactured articles are chiefly drapery, apparel, hardware, iron and steel, books and stationery, boots, beer and spirits, and also large quantities of provisions. Grouped under the several heads already adopted for the imports and exports, the value of the trade for the year 1891 will be found below :—

Re-export Trade, 1891.

	£
Food and beverages, including breadstuffs	421,439
Wines, fermented and spirituous liquors	80,638
Live stock	83,613
Animal and vegetable products, including wool	514,144
Clothing and textile fabrics	411,609
Minerals and metals, raw or partly worked up, excluding coin and bullion	298,173
Specie and precious metals	2,450,173
Articles of education, art, and amusement	174,062
Manufactured articles not elsewhere included	295,383
Articles unclassified by Customs	110,970
Total	4,840,204

Indirect benefit of re-exports.

The benefit derived by the Colony from its re-export trade is indirect and can hardly be estimated. The freights earned by New South Wales vessels carrying such produce do not amount to a large sum, as the carriage is chiefly in other hands. Still the trade is valuable, the probable sum accruing to the Colony from this source being about 5 per cent. on the total value of the trade.

OVERLAND TRADE.

Overland trade affected by railway.

As the major portion of the goods exported overland simply passes through the border colonies of Victoria and South Australia, to Great Britain, the diversion of the trade along the railways of the Colony to its ports, must be looked upon as a distinct gain. It was believed that the extension of the trunk railways to the centres of the pastoral industry would have the effect of permanently diverting a no inconsiderable amount of trade from Victoria and South Australia, but it will be seen from figures in another part of this volume that such diversion has only been partial.

Effect of railways on trade.

State of rivers affects trade.

The condition of the Darling and other western rivers exercises a marked influence on the overland trade, especially in wool; and it is found that when the rivers are not easily navigable a larger proportion of this staple reaches the eastern sea-board than is the case in other seasons. A marked increase in the total trade will be noticed in 1886 and the following years, and in 1891 the value of the trade was more than twofold that of the year first mentioned. This is to no small degree due to the requirements of the population of the Broken Hill silver-fields, whose natural outlet is by way of Adelaide, which is connected by rail with Broken Hill.

Overland Trade.

Year.	Imports.	Exports.	Total.
	£	£	£
1870	1,071,087	2,177,813	3,248,900
1875	1,460,528	4,343,729	5,804,257
1880	1,438,155	4,768,542	6,206,697
1885	2,611,130	3,405,073	6,016,203
1886	2,039,168	4,251,800	6,290,968
1887	3,166,573	5,231,454	8,398,027
1888	3,040,010	5,559,681	8,599,691
1889	3,150,698	6,919,491	10,070,189
1890	4,707,341	8,026,376	12,733,717
1891	4,319,204	8,630,248	12,949,452

TRADE OF AUSTRALASIAN COLONIES.

Trade larger than any other colony.

The trade of New South Wales is larger, both in the gross amount and the value per head, than that of any of the other colonies of Australasia. The total trade of each colony for the past eleven years is given in the following table; and though the latter part of the period was one of severe depression, the magnitude of the trade, not only of this Colony but of the rest of the group, is very suggestive. In gross amount the trade of Victoria ranks second, and the other colonies in the following order:—South Australia, New Zealand, Queensland, Tasmania, and Western Australia

Australasian Colonies.—Total Imports and Exports in each Colony.

Year.	Total Trade.			
	New South Wales.	Victoria.	Queensland.	South Australia (including Northern Territory).
	£	£	£	£
1881	33,894,817	32,970,624	7,603,991	9,840,772
1882	39,145,254	34,941,660	9,852,915	12,249,946
1883	41,785,114	34,142,709	11,509,959	11,376,657
1884	41,738,206	35,252,098	11,055,840	12,569,485
1885	40,487,568	33,596,362	11,665,894	10,925,643
1886	37,031,064	30,325,896	11,037,197	9,693,060
1887	37,693,067	30,373,296	12,275,556	10,755,886
1888	42,149,407	37,825,897	12,773,100	12,678,499
1889	46,157,991	37,137,494	13,788,871	14,322,840
1890	44,660,941	36,220,237	13,621,212	17,328,301
1891	51,327,417	37,718,351	13,384,391	20,468,591

Year.	Total Trade.			
	Western Australia.	Tasmania.	New Zealand.	Australasia.
	£	£	£	£
1881	907,601	2,986,720	13,517,911	101,722,436
1882	1,091,810	3,258,261	15,267,278	115,807,124
1883	963,856	3,564,236	15,070,037	118,412,568
1884	926,860	3,131,975	14,755,555	119,432,019
1885	1,097,083	3,071,179	14,299,860	115,143,589
1886	1,388,406	3,088,107	13,431,804	105,995,536
1887	1,271,010	3,046,188	13,111,684	108,526,687
1888	1,466,596	2,943,929	13,709,225	123,546,653
1889	1,579,519	3,070,892	15,636,362	131,693,969
1890	1,546,260	3,384,504	16,072,245	132,833,700
1891	2,079,559	3,492,782	16,070,246	144,541,337

BRITISH TRADE.

British trade holds high position.

The British trade holds a high position in regard to value, being until recent years even larger than the intercolonial trade of the Colony; and even now if to the value of goods coming directly from Great Britain were added that of goods passing through the neighbouring colonies, but destined for, or coming from, England, the proportion of British trade would be still higher. For, though the nominal trade between the United Kingdom and New South Wales amounted in 1891 to the large sum of £19,435,695, out of a total trade of £51,327,417, it is probable that the actual value of this trade was little short of £26,000,000. The amount of trade, as set down in the subsequent table, is, therefore, much below the truth, especially in regard to exports, as the larger part of the produce exported to Victoria and South Australia overland is in reality destined for British ports. The seaward trade alone can be given, and this will be found in the following table, for 1870 and subsequent periods :—

Direct trade with United Kingdom.

Trade with the United Kingdom.

Year.	Imports.	Exports.	Total British trade.
	£	£	£
1870	3,200,706	2,492,640	5,693,346
1875	6,062,226	6,374,503	12,436,729
1880	6,536,661	7,525,637	14,062,298
1881	8,986,838	7,561,114	16,547,952
1882	11,155,917	7,309,691	18,465,608
1883	10,624,081	9,884,207	20,508,288
1884	11,423,047	7,683,880	19,106,927
1885	11,885,597	7,293,133	19,178,730
1886	10,445,980	6,026,954	16,472,934
1887	7,998,568	6,966,056	14,964,624
1888	9,212,981	8,476,669	17,689,650
1889	8,736,478	8,964,625	17,701,103
1890	8,628,007	6,623,431	15,251,438
1891	10,580,230	8,855,465	19,435,695

INTERCOLONIAL TRADE.

Value of intercolonial trade.

Even more considerable than the British trade stands the intercolonial, the nominal value of which amounted in the year 1891 to £11,127,178 imports, and £11,603,170 exports, or a total trade of £22,730,348. A large part of this trade, however, must be credited to the United Kingdom, as the natural outlet for the produce of the Southern and Western districts, by way of Victoria and South Australia:—

Year.	Imports.	Exports.	Total trade.
	£	£	£
1870	3,677,927	3,837,680	7,515,607
1875	5,878,751	6,570,127	12,448,878
1880	5,945,788	7,381,172	13,326,960
1885	8,595,429	6,936,139	15,531,568
1886	8,082,198	7,705,863	15,788,061
1887	9,016,575	8,993,324	18,009,899
1888	9,085,567	9,614,615	18,700,182
1889	10,647,312	10,741,045	21,388,357
1890	10,981,721	11,284,740	22,266,461
1891	11,127,178	11,603,170	22,730,348

Increase of Intercolonial Trade.

The total intercolonial trade of the Australasian Colonies with New South Wales has largely increased since 1885. This rapid advance is due to the increased value of the wool clip, a large proportion of which is exported to Europe *via* the ports of the southern colonies, and the rapid expansion of the trade between the western districts of this Colony and South Australia, which in 1891 was more than four times that of 1885, the year when operations were first commenced at the Broken Hill mines. The value of the intercolonial trade seaward is only slightly above that of 1885, and considerably below the returns of 1889. The value of the intercolonial trade since 1885, distinguishing the seaward from overland, was as follows :—

Intercolonial trade.—Seaward and Overland.

Year.	Seaward.	Overland.	Total.
	£	£	£
1885	9,515,365	6,016,203	15,531,568
1886	9,497,095	6,290,966	15,788,061
1887	9,611,872	8,398,027	18,009,899
1888	10,100,491	8,599,691	18,700,182
1889	11,318,168	10,070,189	21,388,357
1890	9,532,744	12,733,717	22,266,461
1891	9,780,896	12,949,452	22,730,348

As already pointed out, a great proportion of the intercolonial export trade, especially that which is sent overland, represents produce of this Colony ultimately destined for European markets, though credited to the colony to which it is sent in the first instance. Similarly with the import trade, the large part of the increase comprises goods originally coming from Great Britain, but purchased in the Melbourne and Adelaide markets.

TRADE WITH VICTORIA.

Value of trade with Victoria.

Victoria comes first amongst the colonies of the group, as regards its trade with New South Wales; but the value of goods which it sends to this Colony has declined during late years. It is estimated that prior to the extension of the railway system of this Colony into the Riverine districts, nearly one-fourth of its territory, comprising some of the richest districts in the Colony, traded almost exclusively with Victoria. This has now been, to a great extent, diverted along New South Wales lines to Sydney; and the trade, instead of increasing with the settlement of these districts, has remained almost stationary.

The following table shows the trade during 1870, and for subsequent periods up to 1891 :—

Trade with Victoria.

Year.	Imports.	Exports.	Total.
	£	£	£
1870	1,153,695	2,583,552	3,737,247
1875	2,066,156	4,269,770	6,335,926
1880	2,187,119	4,578,867	6,765,986
1885	3,309,696	3,450,796	6,760,492
1886	2,789,700	3,697,343	6,487,043
1887	2,894,681	4,773,815	7,668,496
1888	2,472,621	5,455,196	7,927,817
1889	2,419,038	5,385,300	7,804,338
1890	2,097,259	5,386,553	7,483,812
1891	2,818,935	5,443,663	8,262,598

Large range of articles imported from Victoria.

The import trade of the Colony from Victoria covers a large range of articles, and in this respect differs from the export, which is mainly comprised in three leading items of raw produce—wool, stock, and coal. Dividing the imports from Victoria into two classes, viz., Victorian and other produce, the chief imports under the former class are agricultural implements, butter, breadstuffs, fruit, oats, hay and other fodder, and vegetables; while under the second head come drapery and apparel, drugs, hardware, iron, machinery, stationery, tea, raw sugar, and various manufactured articles. Victorian produce, properly so called, comes chiefly to Sydney; the other articles are taken by the southern and western portions of the Colony, which have for many years looked to Victoria as a market whence such supplies are to be derived. The following are the values of the principal items of import from Victoria during the last five years :—

Imports from Victoria.

Principal Imports from Victoria.

Description of Goods.	1887.	1888.	1889.	1890.	1891.
	£	£	£	£	£
Agricultural implements	53,229	32,474	36,110	33,060	28,765
Bags and sacks	12,922	9,146	7,469	10,005	11,562
Beer (in wood and bottle)	20,309	17,562	17,814	14,833	17,485
Biscuits	3.289	2,122	1,930	1,355	1,348
Boots and shoes	30,772	54,939	25,123	24,180	29,295
Butter	7,986	18,795	8,542	4,555	19,017
Candles	5,668	9,290	5,578	4,250	9,034
Cheese	1,285	2,671	3,828	1,087	1,530
Cordage and ropes	6,248	4,953	4,523	4,821	5,390
Drapery and apparel	366,072	339,167	313,006	302,087	230,879
Drugs & Apothecaries' wares	22,711	24,720	27,275	26,576	27,017
Earthenware and China	9,787	7,209	6,344	6,667	14,285
Flour	364,107	284,928	247,006	217,763	382,382
Fruit—					
Green	14,914	19,628	16,163	12,860	16,813
Dried	17,803	6,733	9,272	14,588	11,645
Furniture and upholstery	14,860	19,152	20,091	18,679	26,328
Gold (coin, bars, and dust)	274,628	125,461	4,178	4,800	11,006
Grain and Pulse—					
Wheat	34,050	15,515	90,764	11,294	90,310
Oats	17,264	103,173	7,090	6,395	6,559
Others	24,694	17,782	7,472	6,724	12,509
Hardware	39,234	38,464	36,326	40,619	49,865
Hay and chaff	59,492	107,795	116,224	77,641	109,097
Iron and steel goods	41,769	66,604	80,362	86,899	183,302
Jams and jellies	4,019	4,344	3,877	6,635	4,189
Jewellery	7,917	16,600	13,080	11,743	6,587
Lead	826	1,310	4,255	7,954	17,536
Leather	17,255	16,137	13,260	15,411	13,683
Live stock	542,588	517,249	335,061	286,824	283,261
Machinery	41,318	52,209	70,378	56,654	85,015
Malt and hops	14,618	7,881	5,598	12,691	18,696
Musical instruments	13,529	14,038	15,912	8,950	12,209
Oatmeal	8,845	17,346	22,134	17,190	18,721
Oilmen's stores	5,128	9,497	7,703	8,084	10,843
Oils	17,834	12,551	12,349	19,038	17,394
Paper, books, stationery, &c.	56,611	55,666	64,263	64,181	77,257
Potatoes	71,812	97,627	65,854	29,625	44,051
Saddlery and harness	9,872	7,940	8,459	8,343	8,432
Soap	7,777	11,061	12,974	16,487	23,327
Spirits	31,221	23,754	27,593	28,650	34,544
Sugar (raw)	56,104	53,538	62,962	57,019	72,451
Tea	121,731	92,977	83,183	98,690	94,823
Timber	11,951	12,920	13,333	20,647	22,553
Tobacco, cigars, &c.	22,249	20,489	24,581	21,839	23,686
Toys	11,569	17,822	13,235	9,608	11,146
Vegetables (green) and onions	32,633	36,667	26,711	34,817	28,450
Wearing apparel	84,634	83,672	85,374	85,819	112,754
Wines	7,780	6,372	6,217	7,642	9,127
Woolpacks	22,713	13,958	16,449	15,052	15,770

Wool export.

The chief export to Victoria is wool, forwarded to Melbourne for shipment to London and other European ports. A large quantity of this wool is shipped to Europe as the produce of Victoria, on account of the fact that better prices are generally obtained for "Port Phillip" wool. The value of wool exported to Victoria during 1870 and subsequent periods was as follows:—

	£		£
1870	1,057,457	1887	2,451,552
1875	2,253,184	1888	2,187,759
1880	3,224,289	1889	2,952,107
1885	1,868,019	1890	2,521,898
1886	1,931,278	1891	2,779,963

The decrease shown since 1880 is chiefly owing to the decline in the market value of the staple, though also partly to the extension of the railways, which has diverted much of the traffic from the old routes.

Export of stock

Live stock of all kinds forms a large portion of the exports to Victoria, though the imports, especially of sheep, have also been of importance. Victoria has already reached the point where the demand for meat exceeds the cast of stock; and is, therefore, dependent upon the other colonies, especially New South Wales, for the supply of the deficiency, the amount of which is little short of one-fourth of the whole consumption. The sheep exported are almost entirely New South Wales produce; the cattle, however, are generally bred in Queensland, but fattened for market on runs in New South Wales.

Export of coal.

Coal is next in importance as an export of this Colony to Victoria, the value during 1891 being £474,054, which was far larger than the trade in this staple with any other country. The only other articles worthy of note are skins, timber, specie, and fresh fruit, the first-mentioned being sent to Victoria for re-export. The following table shows the trade during 1870 and at subsequent periods:—

Principal Exports to Victoria.

Description of Goods	1887.	1888.	1889.	1890.	1891.
	£	£	£	£	£
Coal	379,206	406,744	488,344	415,824	474,054
Coin—gold	20,250	338,050	200,000	30,028	325,000
Drapery	35,814	39,006	48,149	35,162	31,873
Fish (preserved)	10,535	10,188	5,529	10,813	12,756
Fruit (fresh)	73,760	60,014	71,069	94,538	71,340
Kerosene shale	13,703	12,703	12,595	21,439	8,034
Live stock	1,112,720	1,636,530	918,487	1,650,888	1,216,048
Machinery	15,898	2,991	17,690	17,916	19,561
Periodicals, books, paper, &c.	28,190	20,710	53,866	49,468	22,572
Skins	70,334	81,043	59,126	49,872	66,528
Tea	4,607	6,894	3,754	9,154	9,154
Timber	54,081	83,188	89,524	82,663	31,936
Wheat and other grain	20,194	24,006	67,281	23,347	52,488
Wines	5,160	6,823	15,037	8,778	9,232
Wool	2,451,552	2,187,759	2,952,107	2,521,898	2,779,963

The articles comprised in the import trade are much more varied than in the export, although in point of value the latter trade is about double that of the former.

Overland trade with Victoria.

The greater portion of the exports to Victoria, as well as nearly half the imports, are borderwise. The value of the imports overland, however, fell greatly, from the causes already specified, during 1886, but a decided improvement was manifested in 1887. The reaction, however, was only transitory, as in the succeeding ears the trade was either stationary or exhibited a tendency to ecline; on the other hand, the export trade is increasing. The alue in 1870 and subsequent periods was :—

Overland Trade with Victoria.

Year.	Imports.	Exports.	Total.
	£	£	£
1870	448,308	1,811,848	2,260,156
1875	945,049	3,546,674	4,491,723
1880	963,620	3,824,310	4,787,930
1885	1,555,139	2,450,444	4,005,583
1886	874,680	2,537,549	3,412,229
1887	1,418,212	3,421,254	4,839,466
1888	1,005,497	4,029,349	5,034,846
1889	1,106,864	3,681,588	4,788,452
1890	986,527	4,237,004	5,223,531
1891	1,088,012	4,184,219	5,272,231

TRADE WITH QUEENSLAND.

Trade with Queensland.

Queensland, prior to 1891, ranked next to Victoria in regard the value of its trade with New South Wales, which in some spects is even more important than that of the southern colony. he estimated value of the imports and exports since 1870 is ven hereunder. It is possible that the amounts are somewhat nderstated, as there is a good deal of trade in stock which does ot come under the cognisance of the Customs officers. Though ew South Wales and Queensland have a common boundary of 00 miles, the overland trade, except in live stock, is small.

If, however, the value of stock be added, the figures reach a very large total, as will be seen from the table on page 200:—

Trade with Queensland.

Year.	Imports.	Exports.	Total trade.
	£	£	£
1870	1,767,974	680,301	2,448,275
1875	2,521,312	1,238,226	3,759,538
1880	2,224,421	1,362,262	3,586,683
1885	2,913,588	2,174,266	5,087,854
1886	2,908,017	1,829,586	4,737,603
1887	3,517,745	2,026,598	5,544,343
1888	3,477,603	1,973,968	5,451,571
1889	4,667,700	1,747,853	6,415,553
1890	5,482,452	1,670,465	7,152,917
1891	4,303,520	1,063,780	5,367,300

Imports from Queensland.

The imports from Queensland are chiefly comprised under a few items—gold, live stock, sugar, wool, and tin. Large quantities of gold are sent from Queensland to be minted at Sydney, there being no Mint in the northern colony. The value of wool imported during 1891 was £341,670, being entirely for re-export. Stock was imported to the value of £925,668 of which £830,068 represented cattle, the very favourable season enabling a larger number of stock to be introduced into New South Wales, and depastured near the market for which they are ultimately destined. Below will be found the value of the principal imports during the last five years:—

Description of Goods.	1887.	1888.	1889.	1890.	1891.
	£	£	£	£	£
Boots and shoes........	10,596	2,020	2,957	5,351	2,134
Drapery, apparel, &c.	11,946	10,800	18,603	9,720	20,324
Fruit (fresh)............	22,411	15,921	24,968	15,412	17,892
Gold (bars and dust)..	1,534,236	1,736,343	2,774,531	2,308,776	2,092,364
Live stock	556,172	479,366	832,519	1,965,861	925,668
Maize	6,628	2,058	235	30,651	25,229
Oysters	1,488	917	749	5,659	10,694
Skins....	106,304	110,404	109,487	87,104	76,743
Sugar (raw).............	268,469	211,153	321,071	487,961	503,404
Tallow	41,990	42,223	32,282	45,461	45,461
Wool	305,549	203,880	320,730	265,217	341,670
Tin (ingots and ore)...	206,606	183,314	137,715	146,424	109,417

Exports to Queensland.

The exports have varied greatly in value from year to year through causes similar to those affecting the imports; they comprise a large number of items, mainly, however, the produce of foreign countries. The values of the chief articles, exported from New South Wales to Queensland, have been as follows in the years named:—

Description of Goods.	1887.	1888.	1889.	1890.	1891.
	£	£	£	£	£
Apparel (wearing)	17,311	24,246	14,628	25,129	20,446
Bags and sacks	1,863	3,358	8,058	6,991	12,482
Boots and shoes	23,993	18,976	38,407	38,156	34,996
Coal..................................	10,625	4,098	3,932	3,492	7,291
Coin (gold).......	259,500	278,000	312,000	334,000	36,020
Drapery	188,924	225 119	143,071	113,793	118,658
Flour................................	7,855	28,729	176,816	158,292	93,623
Fruit (fresh)......................	44,039	46,786	70,226	47,829	47,340
Hardware	73,015	66,166	41,889	30,656	25,019
Iron and steel	3,829	13,538	47,899	56,418	49,716
Leather	11,402	8,617	11,683	15,527	13,186
Live stock	216,568	63,695	131,743	251,249	139,729
Machinery........................	23,556	46,313	41,753	37,232	34,951
Paper, books, stationery, &c.	33,061	39,197	36,449	33,326	29,562
Potatoes	29,140	25,027	55,268	39,400	11,699
Tea	11,878	13,248	17,214	20,571	24,557
Tin (ingots, ore, and plate)...	20,002	16,625	15,259	14,490	13,868
Tobacco	26,614	30,369	32,673	26,797	18,809
Wool	3,872	734	5,280	2,000	15,670

Fluctuations in overland trade.

The most remarkable year was 1882, when the export trade reached £3,012,782, the overland export trade amounting to £1,206,408. Of this sum £1,149,835 represents the value of stock exported, viz., 3,035 horses, valued at £25,525; 29,404 cattle, valued at £302,590; and 1,645,657 sheep, of the value of £821,720. During 1886 the value of stock exported was very much less than in previous years, amounting to only £119,449; while, in 1891, the value rose to £139,729. The fluctuation in the value of stock exported will account for the variation in the amounts shown in the following table :—

Overland Trade with Queensland.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1870	527,097	40,540	1887	1,035,123	297,009
1875	249,247	223,667	1888	879,589	170,530
1880	231,161	245,651	1889	951,739	506,247
1885	669,739	337,023	1890	2,158,822	317,717
1886	722,454	317,846	1891	1,103,682	231,613

TRADE WITH SOUTH AUSTRALIA.

Trade with South Australia.

The trade with South Australia was at one time more variable than that with any other colony, depending, as it then did, on the state of the Murray and Darling Rivers. Since 1886, however, the element of uncertainty has been neutralised by the expansion of trade which was found in the requirements of the population of Broken Hill silver fields. The additional trade has proved of enormous advantage to South Australia, as the Barrier district of New South Wales, with its population of 25,000 persons, may be looked upon as commercially a province of the neighbouring Colony. The total imports and exports for stated periods, commencing at 1870, were :—

Trade with South Australia.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1870	366,480	350,247	1887	1,259,758	1,740,517
1875	987,933	654,232	1888	1,831,436	1,661,446
1880	690,407	830,256	1889	1,858,621	2,999,664
1885	890,335	810,953	1890	2,036,492	3,700,124
1886	828,174	1,585,830	1891	2,746,788	4,527,989

f imports is a long one, and like that of Victoria rge number of articles of foreign manufacture :—

Imports from South Australia.

of Goods.	1887.	1888.	1889.	1890.	1891.
	£	£	£	£	£
s	2,282	1,650	3,214	4,223	9,866
	18,855	45,552	36,761	30,395	33,199
es	21,002	16,788	28,125	38,726	43,255
	7,171	25,545	20,750	20,802	30,760
	4,392	6,437	7,684	9,227	12,412
	2,376	3,734	2,259	5,414	14,366
	19,841	64,292	126,047	245,008	441,284
d ingots)	140,530	155,733	179,201	136,460	132,937
ingapparel, &c.	83,197	126,008	123,323	153,109	174,130
thecaries' ware	5,580	9,352	7,730	10,916	11,256
vder, arms, &c.	11,183	25,042	17,881	27,612	30,729
	7,982	20,978	14,120	25,180	36,435
	308,805	296,199	305,180	251,881	300,989
	4,178	12,592	15,102	17,163	26,504
	5,277	5,798	6,532	9,335	10,396
upholstery ..	5,385	27,551	11,321	15,480	18,053
rs, and dust)...	20,886	11,269	38,923	55,302	59,962
se—					
	11,338	98,097	122,772	6,321	85,989
	28,103	41,704	21,484	30,096	33,955
	27,080	38,479	22,140	32,262	35,930
	4,396	2,847	6,699	9,983	12,791
	45,144	102,782	139,647	45,883	61,650
	59,402	109,448	69,978	121,420	182,583
es	11,784	10,799	10,741	13,761	10,789
	27,641	18,318	49,365	31,932	40,235
	37,339	69,482	55,832	86,340	84,700
ed & preserved)	2,604	4,762	5,997	7,737	11,201
	6,892	8,049	8,630	10,097	11,555
stationery, &c.	5,446	12,192	9,280	13,773	21,475
	8,204	10,713	16,867	14,896	18,213
es	6,830	6,788	5,245	6,015	9,524
	35,378	29,901	28,310	32,198	32,175
	16,804	20,754	25,175	31,545	33,886
	14,547	13,875	14,137	15,354	16,788
	70,514	113,503	80,168	174,705	259,141
s, &c.	12,079	14,666	12,001	15,347	12,769
y goods	4,700	6,431	5,981	9,901	9,971
cluding onions)	3,316	8,687	10,825	11,774	13,380
	6,785	13,190	9,396	9,842	9,151

The exports to South Australia are chiefly silver, lead, silver lead ore, and wool; the values of the principal items for the last five years are as follows:—

Description of Goods.	1887.	1888.	1889.	1890.	1891.
	£	£	£	£	£
Boots and shoes	7,468	3,439	17,686	14,685	12,212
Coal.................................	62,715	51,370	92,756	65,614	129,648
Coin (gold)........................	17,000	41,000	5,000	3,000	10,000
Coke	5,098	18,410	13,505	4,490	5,592
Live stock	57,992	62,702	91,603	249,584	141,956
Machinery	11,077	15,409	9,530	12,048	11,860
Paper, books, and stationery	4,258	7,540	5,253	4,754	12,905
Silver (ingots, lead and ore)...	530,462	1,001,749	1,847,178	2,633,338	3,442,381
Skins	10,583	16,253	20,002	23,512	45,064
Sugar (raw)	3,559	8,852	14,987	20,332	16,030
Wool	872,896	244,388	784,802	569,576	599,749

Overland trade with South Australia.

The records of the overland trade were not kept with exactness before the year 1877, but the time which has elapsed since that period is amply sufficient to illustrate the great variations in the value of the exports. The import trade is much more regular, and until the year 1887 showed no great tendency to increase. Since the year named there has been a large extension of trade, which now reaches a considerable figure. This expansion is due, as already pointed out, to the requirements of the newly-found silver-fields near the South Australian Border. The bulk of the articles given in the foregoing list are sent to South Australia for the purpose of re-export, and are not, in the true sense, exports to that Colony. It is not possible, however, to trace these goods to their ultimate destination, and, in accordance with the system adopted in most Customs statistics, the country which the trade first enters is credited as dealing directly with this Colony. This remark applies with equal force to Victoria. The imports from South Australia *viâ* Silverton, Willyama or Broken Hill, and Wentworth on the Darling, amounted to £2,127,510 during 1891. It is anticipated that the extensions of the railway system of this Colony to the banks of the Darling at Bourke and Wilcannia will eventually divert not a little of the traffic which has hitherto gone to Adelaide. The certainty of speedy delivery, and the less amount of handling to which goods will be subjected, will probably more than compensate for the additional expense of delivery at the ship's side:—

Overland Trade with South Australia.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1877	253,838	210,414	1886	442,034	1,396,403
1880	243,374	698,581	1887	713,238	1,513,241
1881	235,769	298,004	1888	1,154,924	1,359,802
1882	412,563	921,427	1889	1,092,095	2,731,656
1883	404,322	782,552	1890	1,561,992	3,471,655
1884	360,965	1,287,441	1891	2,127,510	4,214,416
1885	386,252	617,606			

Victoria displacing South Australia in N.S.W. markets.

The prominence which Victoria has assumed of recent years as a wheat-growing country, acts detrimentally to the trade of South Australia, for much of the breadstuff consumed in New South Wales, which was formerly obtained from Adelaide, is now procured from Victoria. The falling-off in this staple commenced about the year 1878, and is coincident with the development of the Victorian trade in flour and wheat, as will be seen from the following table, showing the value of wheat and flour imported from each of these colonies :—

Wheat and Flour Imported from Victoria and South Australia.

Year.	Value of imports from South Australia.		Value of imports from Victoria.	
	Wheat.	Flour.	Wheat.	Flour.
	£	£	£	£
1870	76,397	123,958	20,758	33,986
1871	260,346	201,963	6,205	33,992
1872	105,523	205,042	7,833	7,715
1873	144,592	201,332	539	17,677
1874	141,675	230,251	1,423	4,180
1875	197,263	289,385	1,514	1,296
1876	187,444	295,371	902	2,188
1877	154,284	261,918	9,765	32,305
1878	116,089	251,246	34,401	153,126
1879	63,973	221,174	13,280	76,310
1880	42,340	263,546	43,249	126,142
1881	19,406	269,342	33,165	113,796
1882	62,117	321,127	23,680	194,823
1883	9,195	229,617	38,794	237,342
1884	36,460	299,274	23,907	216,546
1885	31,236	219,320	23,433	291,999
1886	853	172,299	57,729	384,037
1887	11,388	308,805	34,050	364,107
1888	98,097	296,199	103,173	284,928
1889	122,772	305,180	90,764	247,006
1890	6,321	251,881	11,294	217,763
1891	85,989	300,989	90,310	382,382

TRADE WITH TASMANIA.

Trade with Tasmania.

The commercial intercourse of New South Wales with Tasmania at one time promised to develop into importance; but the total trade, notwithstanding the steady advance of the exports during the last six years, had fallen in 1891 to a lower value than that of 1882. It will, however, be seen that the imports still largely exceed the exports, although the difference in the two branches of the trade is rapidly becoming less every year :—

Trade with Tasmania.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1870	90,827	26,555	1887	587,315	131,477
1875	167,870	44,274	1888	515,378	117,239
1880	383,106	81,484	1889	505,590	174,852
1885	582,177	108,758	1890	432,615	215,674
1886	606,740	110,776	1891	377,174	252,356

Imports from Tasmania.

The chief imports are tin, entirely for the purpose of re-export; green fruit, potatoes, and other agricultural produce. The principal articles of import worthy of note are as follows :—

Description of Goods.	1887.	1888.	1889.	1890.	1891.
	£	£	£	£	£
Bark	27,254	25,284	19,111	21,795	26,052
Coin (gold)	....	....	....	....	25,050
Fruit (green)	68,742	60,853	101,598	100,479	57,153
Hops	7,619	8,733	9,043	15,030	11,600
Jams and jellies	28,182	23,877	12,344	8,351	9,516
Live stock (sheep)	20,382	32,544	41,065	48,075	38,654
Potatoes	68,815	23,844	148,363	76,784	40,078
Silver ore	....	....	....	1,400	24,866
Straw	3,363	3,914	10,343	6,380	7,353
Timber	1,606	1,062	3,850	6,431	8,553
Tin (ingots)	304,507	306,824	98,407	96,916	97,806

Exports to Tasmania.

The export trade embraces a large number of articles, the most important being live stock, raw sugar, coal, and drapery, the aggregate export value of which was nearly £65,500; most of the other articles are foreign manufactured, chiefly the produce of Great Britain.

TRADE WITH NEW ZEALAND.

Trade with New Zealand.

New Zealand gave promise at a former period of being one of the leading customers of this Colony; but, from various causes, both the imports and the exports fell away very considerably. The export trade shows no sign of recovery, while the value of the imports fluctuates with the character of the season in New South Wales, a bad season being always attended with large importations of New Zealand wheats, oats, and other produce:—

Imports and Exports.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1870	298,951	197,025	1887	757,076	300,937
1875	135,480	362,764	1888	788,003	393,288
1880	460,735	525,174	1889	1,195,090	416,824
1885	899,623	369,055	1890	932,073	294,113
1886	949,567	427,640	1891	871,422	280,039

Chief imports.

The imports consist chiefly of gold bullion, timber, agricultural and dairy produce. The value of the principal articles is given herewith:—

Description of Goods.	1887.	1888.	1889.	1890.	1891.
	£	£	£	£	£
Butter	21,206	56,566	51,602	5,953	16,646
Cheese	3,638	11,998	18,029	643	4,113
Drapery, apparel, &c.	17,423	43,449	33,721	15,180	18,420
Flour	8,617	40,920	131,885	63,948	17,181
Fungus	11,075	17,195	14,136	9,682	10,647
Gold, bars and dust	262,344	61,951	61780	237,319	246,550
Grain and pulse—Wheat	3,476	87,155	270,818	40,615	15,417
Do Oats	143,604	118,307	125,824	130,588	126,869
Do Other	33,355	47,126	75,539	79,059	51,113
Gum	800	22,694	6,318	2,697	13,445
Live stock	16,364	8,195	9,639	5,772	19,438
Malt and hops	10,423	6,734	12,732	24,065	7,276
Meat (preserved)	6,299	15,084	13,586	20,430	13,158
Do Bacon, &c.	25,590	13,553	19,552	23,068	18,152
Oatmeal	8,849	9,077	18,354	10,131	10,599
Oysters	2,699	9,304	7,133	4,970	5,392
Phormium tenax	6,373	10,603	8,766	10,632	10,889
Potatoes	30,247	47,110	97,184	82,390	57,079
Timber	83,692	81,403	81,451	62,791	97,983

Exports to New Zealand.

In 1883 direct steam communication was established between New Zealand and Great Britain; this, together with a large falling off in the export of specie, will account for the contraction of the outward trade to New Zealand during the last five years. The value of the principal articles exported to New Zealand during each of the past five years was as follows:—

Description of Goods.	1887.	1888.	1889.	1890.	1891.
	£	£	£	£	£
Coal	81,478	74,841	85,347	86,453	90,662
Coin (gold)	87,000	190,000	110,000	40,025	......
Drapery and apparel	8,296	6,872	13,206	20,102	17,170
Fruit (fresh)	19,114	15,007	15,897	10,088	15,426
Manures	11,554	5,801	13,962	10,883	12,480
Paper, books, stationery, &c.	16,162	13,251	13,117	10,166	15,642
Sugar (raw)	726	3,397	5,238	3,384	8,508
Timber	5,927	7,844	9,022	9,064	8,349

TRADE WITH OTHER BRITISH POSSESSIONS.

Trade with Hong Kong, India, and Fiji.

Besides the Australasian Colonies and Great Britain, the only other British possessions that have a trade with New South Wales at all considerable are Hong Kong, India, and Fiji. The value of the imports and exports of each of these Colonies during 1875, and at subsequent periods, was as follows:—

Trade with Hong Kong, India, and Fiji.

Year.	Hong Kong.		India.		Fiji.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
	£	£	£	£	£	£
1875 ...	117,881	172,676	12,295	10,958	32,345	63,033
1880 ...	228,526	137,577	653	19,611	54,135	120,518
1885 ...	340,187	246,032	117,208	122,066	192,540	128,643
1886 ...	280,449	287,041	100,905	89,299	176,661	111,901
1887 ...	268,126	230,014	147,559	173,508	99,880	75,102
1888 ...	348,106	250,961	208,989	42,791	88,663	78,015
1889 ...	423,522	280,427	169,619	136,879	129,742	84,833
1890 ...	271,730	255,050	195,368	253,280	99,853	98,951
1891 ...	273,383	282,309	260,307	127,388	89,859	103,773

Hong Kong commercially is a port of China, and no inconsiderable portion of the trade of this Empire with New South Wales is transmitted *via* that port. The China trade is of a variable nature, the total for 1891 being only £283,093, against £378,949 in 1884, but during the last decade satisfactory progress is shown. The imports from Hong Kong during 1891 consisted principally of opium valued at £44,896, tea at £41,949, rice at £51,341, tobacco at £20,476, silks at £13,885, China oil at £13,492, flax and hemp at £12,753, and mats and matting at £3,155. The export trade for 1891 is chiefly comprised in the following items:—Coin to the amount of £212,476; coal, £31,761; bêche-de-mer, £3,333; fungus, £11,535; lead, £2,208; and old metal, £11,388.

India trade.

The Indian trade has grown up almost entirely since 1880, in which year it amounted to only £20,264, increasing to £422,137 in 1884. Since that period the trade has greatly fluctuated, due in a large measure to the variable export of coin. During 1890, the trade reached a total of £448,648, the highest yet attained; in 1891 the value had declined to £387,695. Castor oil is an article very largely imported from India, the value of oil received during 1891 being £37,268. There is also a large trade in woolpacks, the importations amounting to £88,596; and in bags and sacks, of which goods to the amount of £60,710 were received. The only other articles imported during 1891 in any quantity were rice, £6,127; timber, £14,500; and tea, £28,736. There were no importations of grain and pulse during the year, except a small quantity of bran, to the value of £292, and maize £50. The outward trade with India is confined almost entirely to coin, coal, and copper; of coin the export was valued at £45,425, of gold (bars and dust) £41,936, of coal £12,149, copper £17,150, and horses £8,800—the five items mentioned comprising a value of £125,460, out of a total export trade during 1891 of £127,388. The great falling-off noticeable during some of the years since 1885 is due to the decline in the copper trade, and in the amount of gold coin exported; in that year the value of copper exported was £88,540, and in 1888 only £15,240, but in neither of these years was there any export of coin. In 1891, however, the value of the two exports mentioned rose to £62,575.

Trade with Fiji Islands.

The Fiji Island trade is valuable, but like the trade with other colonial possessions is rather unsteady. In 1875 the imports from these Islands were valued at £32,345, and the exports at £63,033, being a total of £95,378, while in 1891 the imports had risen in value to £89,859, and the exports to £103,773, the total trade thus being £193,632. The imports were highest in 1885, when they were valued at £192,450. The exports reached their highest total in 1883, when they amounted to £248,380; from that time there was a steady decline until 1887, when the lowest figure was reached. Since then the exports have gradually recovered, but the figures for 1891 are not so high as those for 1886.

TRADE WITH GREAT BRITAIN AND BRITISH POSSESSIONS.

Chief trade of Colony with Britain and dependencies.

To what extent the trade of the Colony follows the British flag may be gathered from the following figures, which show not only the value of the trade of New South Wales with Great Britain and her dependencies during the past years, commencing with 1870, but also the proportion which that trade bears to the whole. A steady proportionate decline is apparent since 1886, which was about the period when direct trade with Continental Europe was established, and which since that date has yearly expanded as the return of foreign trade shown on the succeeding page will clearly show:—

Trade with Great Britain and British Possessions.

Year.	Imports from Great Britain and British possessions.	Percentage of total imports.	Exports to Great Britain and British possessions.	Percentage of total exports.
	£		£	
1870	6,924,998	83·59	7,687,148	95·72
1875	12,563,296	93·13	13,213,258	96·65
1880	13,021,783	91·85	15,210,314	97·00
1885	21,299,715	89·74	14,794,052	88·33
1886	19,153,071	89·86	14,250,570	90·66
1887	17,564,948	91·62	16,485,109	89·00
1888	19,034,772	89·66	18,508,498	88·47
1889	20,198,508	88·34	20,281,259	87·06
1890	20,273,053	89·64	18,582,372	84·29
1891	22,474,355	88·54	21,066,606	81·20

FOREIGN TRADE.

Uniform increase of foreign trade.

Foreign Imports and Exports.

The value of the trade of the Colony with countries other than those under British dominion shows a large increase since 1882, as will be at once seen from the subjoined table. The import trade is marked by a fairly uniform growth, while the export trade, though less regular, showed proportionately a more considerable increase. During 1881 the value of imports advanced £635,101, and the exports £826,357, an increase due mainly to the peculiar development of trade with the United States; while the large expansion found in the subsequent years arose from the establishment of direct trade with France, Belgium, and Germany. The total value of imports shows a large decline in 1887, which is chiefly due to a falling-off in the United States trade, though a sensible decline may be also observed in the imports from other leading foreign States. However, the lost ground was more than recovered in subsequent years. The decline in 1890 was due to causes already explained :—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1882	2,200,734	1,206,874	1887	1,606,369	2,036,641
1883	2,139,789	1,591,900	1888	2,194,505	2,411,632
1884	2,218,662	1,355,640	1889	2,664,549	3,013,675
1885	2,437,746	1,956,055	1890	2,341,951	3,463,565
1886	2,160,056	1,467,367	1891	2,909,042	4,877,414

THE UNITED STATES.

United States largest foreign market.

The United States is the largest foreign market of the Colony, the value of both the imports and exports far exceeding that of any other country. The import trade has been marked by a fairly uniform rate of increase until 1886, since which year the value of trade has greatly fluctuated. The export trade also shows great variableness, and depends almost entirely on the demand for gold which prevails in the States. The peculiarity of the trade will be, perhaps, best exemplified in the following table :—

Trade with the United States.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1882	886,171	676,598	1887	693,420	934,443
1883	922,574	872,983	1888	967,528	1,044,144
1884	954,665	366,732	1889	1,094,697	1,130,589
1885	1,008,572	985,531	1890	859,102	1,300,375
1886	1,018,773	521,216	1891	1,277,032	2,313,671

The imports comprise a large number of articles, amongst which the following are the most important, the values given being those for 1891 :—

Class of goods imported from United States.

	£
Brushware	11,784
Carriages, and carriage materials	49,105
Drugs and apothecaries ware	29,866
Fish (preserved)	26,157
Furniture and upholstery	20,879
Hardware	104,739
Iron and steel	14,957
Kerosene	80,645
Leather	52,622
Machinery	65,856
Malt	30,482
Meat (preserved)	11,888
Paper, books, stationery, &c.	49,339
Railway plant	172,436
Sewing machines	33,627
Silver plate and plated ware	11,075
Sugar (raw)	11,033
Timber—dressed and undressed	196,570
Tobacco, cigars, &c.	74,467
Turpentine	14,949
Watches and clocks	21,322

The other articles imported are mostly manufactured goods. In most years there has been a fairly large import of breadstuffs from the United States, and during 1886 the value of such imports was £96,216; in 1889 the value of flour imported reached £54,490, and wheat £142,397, but in 1891 the imports of grain and pulse of all kinds largely decreased, only amounting in the total to £6,240.

Exports to America.

The exports to the United States are chiefly confined to specie and a few articles of raw material, the produce of the Colony, the principal of which are gold, coal and shale, tin, wool, and marsupial skins. No other goods are exported in considerable quantities. During the year 1891 the value of the export of these articles was :—

	£
Gold (bars and dust)	50,670
Gold (coin)	1,660,000
Coal	200,851
Tin	75,410
Skins (chiefly marsupial)	169,001
Wool	131,024
Shale	7,437

Large export of gold to United States.

For some years past there has been a considerable export of gold to America, the quantity sent away during 1891 and the two previous years being especially large. This export first commenced in 1881, and the value of the precious metal both coined and uncoined exported since the year named was :—

Gold Exported to America.

Year.	Value.	Year.	Value.
	£		£
1882	382,347	1887	651,612
1883	564,316	1888	578,488
1884	106,719	1889	751,220
1885	726,653	1890	1,016,940
1886	229,137	1891	1,710,670

BELGIUM.

Trade with Belgium.

The direct trade between this Colony and Belgium began in 1881, and may, to a large extent, be attributable to the International Exhibition held in Sydney during 1879–80. In the year mentioned the combined imports and exports amounted to only £26,237, while in 1891 they had risen to £1,227,610, which cannot but be regarded as an enormous increase in so short a time. In point of value the Belgian trade of the Colony is larger than that of any other foreign country, the United States excepted; but the port of Antwerp which receives the bulk of the trade is simply a distributing centre for the greater part of the wool destined for French, German, and other Continental markets.

Principal imports.

The goods imported from Belgium comprise a large number of articles. Iron in its various manufactures, principally in bars, plate, and wire, comprises a very large proportion of the total imports, and glassware, candles, cigars, cement, and starch are all imported to some extent, though the trade in each commodity is subject to considerable fluctuation.

Belgium a large purchaser of N.S.W. wool.

The outward trade with Belgium is confined almost entirely to wool, though some tallow is also exported. During 1891 the amount of washed wool sent to Belgian ports was 2,054,399 lb., valued at £90,990, and 33,620,273 lb. of greasy wool of the value of £928,624, making a total of £1,019,614. Belgium is, therefore, next to Great Britain, the largest purchaser of New South Wales wool; for, though the export both to Victoria and South Australia exceeds that to Belgium, it is merely nominal, as very little of the wool is retained in these colonies for home use. The following table shows the import and export trade with Belgium since 1881:—

Trade with Belgium.

Year.	Imports.	Exports.
	£	£
1882	39,951	21,659
1883	31,162	160,390
1884	74,904	326,488
1885	195,318	399,549
1886	173,831	424,938
1887	37,735	557,710
1888	64,766	723,286
1889	88,843	725,687
1890	130,819	1,011,846
1891	188,277	1,039,333

GERMANY.

Trade with Germany.

A large trade has been maintained with Germany since 1879. Direct communication was established in 1887 by the North German Lloyd's Company, of Bremen, and further extended by a line of German cargo boats trading between Hamburg and Sydney since 1888. This trade bids fair to develop into considerable dimensions, as will be seen from the following list, which shows the values of the principal articles imported from Germany during 1891 :—

	£
Apparel, drapery, boots, &c.	149,768
Books, paper, stationery, &c.	16,422
Candles	30,289
Cement	32,783
Furniture	36,649
Glass and glassware	21,191
Iron and iron manufactures, including hardware.	95,487
Machinery	22,119
Musical Instruments	72,251
Sewing machines	9,625
Spirits	55,803
Sugar	22,276
Telegraphic material	11,014
Tobacco, cigars, and cigarettes	42,784
Toys and fancy goods	33,131

Wool chief export to Germany.

The exports consisted almost entirely of wool, the value of which, in 1891, was £407,924, out of a total export of £437,522. This increase in the wool export during the last years shown is chiefly due to the greater facilities now existing for direct shipment :—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1882	180,951	11,661	1887	296,952	100,012
1883	213,709	7,947	1888	481,009	128,546
1884	337,881	43,979	1889	533,082	519,435
1885	372,557	29,511	1890	639,475	404,280
1886	361,612	54,471	1891	773,016	437,522

FRANCE AND NEW CALEDONIA.

Trade with France.

The French trade has risen into importance since 1881, as will be seen by the subsequent table. The increase is due almost entirely to the establishment in 1883 of direct communication between this Colony and the Republic by the Messageries Maritimes Company, but it has been accompanied by a corresponding falling off in the trade with New Caledonia, the chief dependency of France in the South Pacific. For though in 1882 the total value of French imports and exports amounted to only £107,920, as against £600,920 in 1891, those of New Caledonia fell during the corresponding period from £501,650 to £234,146.

Class of goods imported from France.

Wearing apparel and drapery form the largest class of imports from France; the imports of drapery and silk amounted in 1891 to £28,365; of apparel, £2,123; and of boots to £10,646. Next in importance are wines and spirits—the import of the former amounted to £15,504, and of the latter to £6,619. Oil to the value of £4,188; and toys and fancy goods, £7,797—are the only other goods largely imported. Large quantities of French goods are imported from Great Britain; but the indirect trade is now fast being superseded by direct trade, and the cost of commission and double handling thus saved to the Colony.

Wool chief export to France.

Wool forms the chief export to France. The value exported during 1891 was £409,553, an increase of £274,401 over the export of the previous year. Sheepskins to the value of £56,946, and tallow to the value of £8,092 were also exported:—

Trade with France.

Year.	Imports.	Exports.
	£	£
1882	98,176	9,744
1883	211,722	24,786
1884	218,755	183,890
1885	345,231	142,104
1886	216,193	149,509
1887	157,732	85,151
1888	154,856	120,723
1889	179,900	104,104
1890	117,871	233,924
1891	120,321	480,599

New Caledonian trade.

As already pointed out, New Caledonia is an important market for the produce of the Colony, though its value has been considerably affected by the establishment of a regular communication between France and her dependency. The trade with New Caledonia reached its highest point in 1882, when produce was imported into New South Wales to the value of £273,370, and exported to the amount of £228,280. Since that year the imports and exports show a very considerable decline :—

Trade with New Caledonia.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1882	273,370	228,280	1887	70,676	137,212
1883	152,096	212,528	1888	68,637	153,957
1884	107,509	210,552	1889	85,582	189,660
1885	82,181	153,094	1890	83,920	193,389
1886	64,952	111,332	1891	48,378	185,768

CHINA.

Trade with China.

The only other country whose trade with New South Wales reaches a large figure is China. The imports and exports credited to Hong Kong, however, belong in reality to the country generally, and the diminution which is seen in the China trade since 1881, is to be attributed in no small degree to the transference of part of the trade from the ports of the Empire to Hong Kong. Still, when allowance is made on this score, it will be found that the actual loss of trade is by no means inconsiderable. The main import from China is tea, which exhibits a falling off although no perceptible decline is observable in the consumption of the article; but the decline may be owing to a decrease in the quantity required for re-export, which denotes a loss to the Colony, and to the larger consumption of Indian teas, the imports of which are increasing every year. The direct export trade has never been large. The amounts shown as exported to China do not however represent the whole value of the trade, as a considerable portion is sent via Hong Kong, which is a distributing centre for the Empire, as previously mentioned, and to correctly gauge the commercial relations between this Colony and China, that of Hong Kong should be considered in conjunction with it :—

Small direct export trade.

Year.	Imports.	Exports.	Year.	Imports.	Exports.
	£	£		£	£
1882	358,783	28,958	1887	251,722	14,510
1883	259,108	21,351	1888	309,934	7,651
1884	357,208	21,741	1889	257,353	11,587
1885	303,595	21,114	1890	241,840	1,037
1886	195,930	16,462	1891	270,929	12,164

TRADE WITH ALL COUNTRIES.

The amount of imports and exports of each country, in proportion to the total, for 1870 and subsequent periods, is shown in the following tables. As already pointed out, the border colonies of Victoria and South Australia appear more advantageously than their importance warrants, owing to the large amount of trade merely passing through their territory for shipment to Great Britain, while the trade to the last named country, as shown on the table, is less than the truth, by the amount thus over-credited to Victoria and South Australia :—

Total trade.

Imports—Percentage of the Imports from each of the Principal Countries.

Year.		British Empire.						
		United Kingdom	Victoria.	Queensland.	South Australia	New Zealand.	Other Colonies or Possessions.	Total British Empire.
1870	..	38·7	14·0	21·4	4·4	3·6	8·0	90·1
1875	...	44·2	15·0	18·4	7·2	1·0	7·5	93·3
1880	..	46·1	15·4	15·7	4·9	3·2	6·5	91·8
1885	...	50·1	14·0	12·3	3·7	3·8	5·9	89·8
1886	...	49·0	13·1	13·7	3·9	4·4	5·8	89·9
1887	...	41·7	15·1	18·4	6·6	4·0	5·9	91·7
1888	...	43·4	11·6	16·4	8·6	3·7	5·9	89·6
1889	...	38·2	10·6	20·4	8·1	5·2	5·8	88·3
1890	...	38·2	9·3	24·2	9·0	4·1	4·8	89·6
1891	...	41·7	11·1	16·9	10·8	3·4	4·5	88·4

Year.		Foreign Countries.						
		United States.	Belgium.	Germany	France.	China.	Other Foreign Countries	Total Foreign Countries
1870	...	1·8	......	......	0·7	3·1	4·3	9·9
1875	...	1·5	......	......	0·0	2·3	2·9	6·7
1880	...	2·7	.....	0·4	0·3	2·5	2·3	8·2
1885	...	4·2	0·8	1·6	1·4	1·3	0·9	10·2
1886	...	4·8	0·8	1·7	1·0	0·9	0·9	10·1
1887	...	3·6	0·2	1·5	0·8	1·3	0·9	8·3
1888	...	4·6	0·3	2·3	0·7	1·5	1·0	10·4
1889	...	4·8	0·4	2·3	0·8	1·1	2·3	11·7
1890	...	3·8	0·6	2·8	0·5	1·1	1·6	10·4
1891	...	5·0	0·8	3·1	0·5	1·1	1·1	11·6

Steadiness of trade with British Empire.

The outward trade with the British Empire has never proportionately varied more than 5 per cent. since 1870; and, if the return of 1891 be compared with that of the first mentioned year, only 1·7 per cent. decrease is apparent, while the exports as shown in the following table, have steadily fallen, till in 1891 they were proportionately less than in any previous year, and nearly 16 per cent. below those of 1880. It will be readily seen that the imports from Great Britain and her Colonies have almost maintained their own for the period under review, notwithstanding the rapid development of the continental trade since 1886.

Exports—Percentage of Exports to each of the Principal Countries.

Year.	British Empire.						
	United Kingdom	Victoria.	Queensland.	South Australia	New Zealand.	Other Colonies or Possessions.	Total British Empire.
1870 ...	31·0	32·2	8·5	4·3	2·4	17·7	96·1
1875 ...	46·2	30·9	9·0	4·7	2·6	3·2	96·6
1880 ...	48·0	29·2	8·7	5·3	3·3	2·5	97·0
1885 ..	43·5	20·6	12·9	4·9	2·2	4·2	88·3
1886 ...	38·4	23·5	11·6	10·1	2·7	4·3	90·6
1887 ...	37·6	25·8	10·9	9·4	1·6	3·7	89·0
1888 ...	40·5	26·1	9·4	7·9	1·9	2·6	88·4
1889 ...	38·4	23·1	7·5	12·9	1·8	3·3	87·0
1890 ...	30·0	24·4	7·6	16·8	1·3	4·1	84·2
1891 ..	34·1	21·0	4·1	17·4	1·1	3·4	81·1

Year.	Foreign Countries.						
	United States.	Belgium.	Germany	France.	China.	Other Foreign Countries	Total Foreign Countries
1870 ...	0·5	...	...	...	0·1	3·3	3·9
1875 ...	1·1	..	...	...	0·3	2·0	3·4
1880 ...	1·1	...	...	...	0·1	1·8	3·0
1885 ...	5·9	2·4	0·2	0·8	0·1	2·3	11·7
1886 ...	3·3	2·7	0·4	1·0	0·1	1·9	9·4
1887 ...	5·0	3·0	0·6	0·5	0·1	1·8	11·0
1888 ...	5·0	3·5	0·6	0·6	0·1	1·8	11·6
1889 ...	4·9	3·1	2·2	0·5	0·1	2·2	13·0
1890 ...	5·9	4·6	1·8	1·1	0·1	2·3	15·8
1891 ...	8·9	4·0	1·7	1·9	0·1	2·3	18·9

Imports exceed exports.

The imports of the Colony, taken over a series of years greatly exceed the exports. The causes of this excess are chiefly two—the flow of British money to the Colony for investment, and the proceeds of loans floated by the Government for the purpose of carrying out public works. Were these importations to cease, the exports of New South Wales would exceed the imports; for, not only would the Colony be required to send out the value of the goods imported, with their freight to its shores, but also the amount of interest payable on loans, the earnings of money sent here for investment, and the incomes derived by persons living abroad, from property held in the Colony.

THE TARIFF.

Tariff of 1891.

On the 2nd December, 1891, a new Customs tariff was enforced, which was assented to on the 2nd March of the following year, as the Customs Duties Act of 1891. Under the new tariff the number of articles subject to a specific duty was increased, and with the exception of raw coffee and cocoa, sago, tapioca, tea, ungalvanized wire, and wire rope, which are now admitted free, the articles in the specific list of the previous tariff have been included in that of the new one. *Ad valorem* duties, which were abolished in 1887, were re-imposed, but instead of the 5 per cent. formerly charged, they were increased to 10 and 15 per cent. The articles on which the latter duty is placed are defined, and number seventeen, while 10 per cent. is charged on all articles not included in the other two classifications or the free list. The classification of the tariff was as follows:—

Customs Duties Act of 1891.

Specific Duties.

Schedule A.

Articles.	Rate of Duty.
Arrowroot, baking powder, yeast custard and egg powders, self-raising flour, barley (prepared or patent), patent groats, cornflour, maizena, and farinaceous foods prepared (not being wheaten flour or oatmeal or otherwise exempt), fish (dried, preserved, or salted), fish paste, meats (poultry, soup, and game, potted paste, dried or preserved, and not otherwise charged), fruit (boiled or in pulp), peel (drained or dry), almonds, gelatine, glue, size, honey, milk (condensed or preserved), blasting powder, dynamite, lithofracteur, starch and starch powder, rice flour and ground rice, semolina, vegetables (preserved and not otherwise charged, salted in brine or saltwater), mushrooms and tomatoes preserved, wax and stearine... ⅌ ℔.,	1d.

Customs Duties Act of 1891—*continued.*

Articles.		Rate of Duty.	
Candles and night lights		℘ ℔	1½d.
Biscuits, bacon (cured, partially cured, or green), cheese, hams (ham and potted ham), meat extract, butter and lard, confectionery (cakes, comfits, liquorice, liquorice paste, lozenges, cocoanut in sugar, sugarcandy, succades, sweetmeats), fruits (dried, candied, and prunes), jams and jellies, preserved and canned fruits, fancy soap		,,	2d.
Sporting powder, sheepwash tobacco, chicory (raw or kiln-dried)		,,	3d.
Chocolate and chocolate creams, cocoa or cocoa paste		,,	4d.
Butterine and oleomargarine, chicory, dandelion and taraxacum (roasted, ground, or mixed), coffee (roasted, ground or mixed)		,,	6d.
Opium, and any preparation thereof		,,	20s.
Cement, plaster, and hydraulic lime		℘ barrel,	2s
Green fruit (except bananas and pine apples)		℘ bushel,	1s.
Tobacco unmanufactured, entered to be manufactured in the Colony into tobacco, cigars, and cigarettes		℘ lb.,	1s.
Tobacco for home consumption (manufactured, unmanufactured, and snuff)		,,	3s.
Cigars and cigarettes		,,	6s.
Barley, beans, maize, oats, peas (dried and split), wheat		℘ 100 ℔.,	10d.
Flour, bran, pollard, and sharps		,,	1s.
Hay, chaff, and straw		℘ ton,	10s.
Onions		,,	20s.
Potatoes		,,	10s.
Oatmeal		,,	40s.
Rice		,,	60s.
Salt (except rock salt)		,,	20s.
Vegetables (fresh)		℘ cwt.,	1s.
Acetic acid		℘ gallon,	2s. 6d.
Aerated and mineral waters—pints and smaller quantities		℘ dozen,	6d.
Beer, ale, porter, spruce, or other beer, cider, and perry	In wood or jar	℘ gallon,	6d.
	In bottle	,,	9d.
	For six reputed quarts or twelve reputed pints	,,	9d.
Cordials and wines not containing spirits	Balm syrups, fruit essences not spirituous, lime fruit and lime juice cordials, citronade, raspberry vinegar, aromatic vinegar, raspberry, strawberry, and other fruit acids, reputed quarts	℘ dozen,	1s. 6d.
	,, ,, pints and smaller quantities	,,	9d.
Fruits	Bottled, not containing spirits, reputed quarts	,,	2s.
	,, Reputed pints and smaller quantities	,,	1s.
Spirits		℘ proof gall.,	14s.
Bitters, essences, fluid extracts, sarsaparilla, tinctures, medicines, infusions, and toilet preparations.	Containing not more than 25 per cent of proof spirit	℘ gallon,	3s. 6d.
	Containing not more than 50 per cent. of proof spirit	,,	7s.
	Containing not more than 75 per cent. of proof spirit	,,	10s. 6d.
	If containing more than 75 per cent. of proof spirit	,,	14s.

Customs Duties Act of 1891—*continued.*

Articles.		Rate of Duty.	
Methylated spirit		⅌ gallon,	1s.
Perfumed spirits, perfumed waters, Florida water, and Bay rum		,,	20s.
Varnishes	Containing spirit	,,	2s.
	Not containing spirit	,,	1s.
Vinegar, other than aromatic or raspberry		,,	6d.
Wines	Sparkling, for six reputed quarts or twelve reputed pints		10s.
	Other kinds, for six reputed quarts or twelve reputed pints		5s.
Naptha and gasoline		⅌ gallon,	6d.
Oils	Except linseed oil raw or boiled, sperm and black whale, palm, and cocoa-nut	,,	6d.
	In bottle, except essential oils, reputed quarts	⅌ dozen,	1s. 6d.
	,, reputed pints	,,	9d.
	,, reputed half-pints and smaller sizes	,,	6d.
Oilmen's Stores	Sauces and pickles, quarts	,,	1s.
	,, ,, pints and smaller sizes	,,	6d.
Grease, axle and lubricating, per ton		,,	60s.
Paints and colours ground in oil		⅌ ton,	60s.
Dry colours		,,	30s.
Putty		,,	20s.
Soap, other than fancy		⅌ cwt.,	3s.
Soda crystals		⅌ ton,	40s.
Sulphuric acid		⅌ cwt.,	2s. 6d.
Iron	Bolts, spikes, nuts, rivets, screws, bolt-rings, washers (plain or galvanized)	⅌ ton,	40s.
	Galvanized, in bars, sheets, bundles, or corrugated	,,	40s.
	Galvanized manufactures, not being parts of machines, or otherwise charged or exempt	,,	60s.
	Galvanized wire netting	,,	30s.
	Pig iron (from January 1, 1893)	,,	10s.
Lead	Pipe	,,	60s.
	Sheet and roll	,,	40s.
Shot		⅌ cwt.,	5s.
Zinc, perforated or manufactured		,,	3s.
Paper	brown and wrapping	,,	3s.
	bags (printed)	,,	15s.
	,, (plain)	,,	7s. 6d.
	Advertising matter—circulars, labels, bill-heads, posters, and notices printed, enamelled or otherwise on any material, or lithographed	,,	15s.
	Playing cards	⅌ doz. pks.	3s.
Rope cordage		⅌ ton.,	60s.
Twine and lines, except twine for reapers and binders		,,	60s.
Sugar	refined	⅌ cwt.,	6s. 8d.
	raw	,,	5s.
	Molasses and treacle	,,	3s. 4d.
	Glucose, liquid and syrup	,,	3s. 4d.
	Glucose, solid	,,	5s.
Timber, dressed		⅌ 100 ft. superficial	3s.
,, rough and undressed, with the exception of hickory, oak, sandal-wood, and sycamore		⅌ 100 ft. superficial	1s. 6d.

Customs Duties Act of 1891—*continued.*

Articles.	Rate of Duty.	
....	⅌ 100	1s.
....	⅌ 1,000	9d.
....	⅌ 1,000	1s.
lressed	⅌ 100 ft. s.	3s.
shes, and shutters	each	2s.

ables and billiard-table materials, carpets, silks, satins, lace,
kid gloves, velvets, rugs, gold and silver plate and plated
; carriages (whole or in parts), including buggies, barouches,
es, dogcarts, gigs, and tilburies; china and porcelain ware,
lery and precious stones, musical instruments and parts thereof,
hes and clocks and parts thereof, pictures, paintings, and statuary,
nanteaus, travelling bags and dressing cases (with or without
gs) :—
ry £100 on the value thereof the sum of £15.

Schedule B.

imported into New South Wales and not enumerated in Schedule
C :—
ry £100 on the value thereof the sum of £10.

FREE LIST.

Schedule C.

live.
on metal.
y ore.
olours.
packing.
nd maps for school use.
ny and ore
ks, and woolpacks—except
travelling, and bags
ise charged.
ot otherwise charged.
(fresh)
t being for medicinal pur-

(saddlers'), brass, silver,
kel.

-mer.
ore.

(not building).
duck and pipe.
t.

ducational, copy, and
e, for school use.
stic.

Brewers' isinglass.
Brimstone.
Bristles.
Brushmakers' materials.
Buckles (saddlers').
Building stone (unwrought).
Cables, chain (iron) stud link, or not less than half-an-inch in diameter.
Candle cotton.
Candle nuts.
Candle wick.
Canes.
Card mounts.
Caustic soda.
Caustic potash.
Chains—Breeching, leading, backband, belly-band, hip-strap, 'busend, springcart, and trace end chains.
Charcoal.
Charts—Admiralty.
Chlorate of potash.
Chloro di nitro benzol.
Chrome ore and metal.
Clays and earths, not otherwise charged.
Clover seed.
Cobalt ore.
Cocoanut fibre.
Cocoa, raw.

Customs Duties Act of 1891—*continued.*

Cocoanuts.
Coffee, raw.
Coin.
Coir fibre.
Coir yarn.
Collar checks (saddlers').
Copperas.
Copper ore and regulus.
Copper ingots.
Copper rivets and washers.
Copra.
Cordage, rope, and sails, old and condemned.
Cork.
Cotton, raw.
Cotton in piece, including chintz, gambroon, calicoes, jean, mosquito net, muslins, prints, Scotch twill, duck, forfar, holland, jute goods, longcloth, sewing cottons, sewing silks, sheeting, shirting, silesia, ticks, towelling, twills, union, wadding, needles, pins, beads, canvas, druggetting, felt, whalebone, &c.
Cotton waste.
Cotton wool.
Crude drugs, &c.
Dairy refrigerators, separators, and parts thereof.
Dates.
Dextrine—shoemakers'.
Dyeware and dyes.
Earths, not otherwise charged.
Emery cloth, in piece, not coated.
Engine packing.
Felt (tarred).
Fibre, cocoanut and coir.
Firewood, rough.
Fish, fresh.
Fishing nets.
Flax.
Flint.
Flock.
Foil.
Fresh meat.
Frozen meat.
Fungus.
Garden seeds.
Ginger (not otherwise charged).
Glass, broken.
Globes for school use.
Gluepieces.
Gold bars.
Gold dust.
,, quartz.
Grass seeds.
Gums.
Hair.
Hames.
Hat linings, cork.
Heel-tips and plates, black-iron toes and toe-plates (shoemakers')
Hemp.
Hides and glue pieces.
Hogskins.
Hoofs and bones.
Hooks, eyelet.
Hops.
Horns.
Hospital dressing and appliances.
Indiarubber goods.
Iron and steel—bar, rod, plate, sheet, T angle, and hoop (not galvanized).
Iron scrap.
Isinglass.
Ivory nuts.
Kapok.
Kauri gum.
Knitting machines.
Lead ore.
Lead pig.
Leather, Morocco.
Limejuice and lemonjuice not bottled.
Limestone.
Linseed.
Linseed meal.
Lint.
Liquid driers.
Litharge.
Locomotive wheels.
Macaroni.
Malt.
Manures—
    Bone dust.
    Guano.
Maps for school use.
Marble and slate slabs.
Matches.
Meat, fresh and frozen.
Mill silk.
Milk foods.
Milk, fresh.
Millstones.
Minerals not otherwise charged.
Mineral pitch.
Mops.

Customs Duties Act of 1891—*continued.*

l.
ellow muntz metal.
unmanufactured) and ore.
of ammonia.
lible) not otherwise charged.

e.
ack whale, cocoanut,
ial (excepting lemon and
ptus), fish, linseed oil
or boiled), palm, seal,
whale not in bottles.

fresh.
s, outer, in which goods are
y imported, except iron
.
s, empty—used and re-
d.
Manilla for manufacturing
paper.
photographic—albumenised.
printing.
writing.
ers' baggage, being ordinary
furniture, second-hand used
ure and effects accompany-
any passenger, and which
been used by such passenger,
are not imported for sale,
if not exceeding fifty pounds
.
ell.
wood and slate.

um tenax.
, until 1st January, 1893.
ples, fresh.
d tubes—brass, brass cased,
steel, and copper.

shrubs, and trees.
silk hat.
s stones, unset.
books, being literary com-
ions and periodicals.
music.
s' and writing paper.
rs, felt, hatters'.

lver.

y waggon wheels.

P

Rattans, canes, and willows.
Reapers and binders, and parts thereof.
Refrigerators, dairy, and parts thereof.
Resin.
Rivets, copper.
Rock salt.
Rope, old.
Saddle-trees.
Saddlery and harness—articles used in.
Sago and sago flour.
Sails, old.
Salt, rock.
Sandalwood, not dressed.
School and book slates.
Seeds—garden, clover, grass, and linseed.
Separators, dairy, and parts thereof.
Sewing machine heads.
Shark fins.
Shellac.
Shoe pegs.
Shrubs.
Silicate.
Silver, German, in sheets.
Silver ore, bullion, and amalgam.
Skins, not dressed.
Skins (split) for bottle tops.
Slate slabs.
Slates, school and book.
Soda ash.
Soda, bi-carbonate.
Soda, carbonate.
Soda crystals.
Specimens of natural history.
Spelter.
Spices.
Sponges.
Spunyarn.
Spurs.
Stirrup-irons.
Straw-plait.
Sulphur.
Tallow.
Tapioca and tapioca flour.
Tar.
Tea.
Terebene.
Timber, undressed—ash, hickory, oak, sandalwood, and sycamore.
Tinfoil.
Tin ingots.
Tin plates.

Customs Duties Act of 1891—*continued.*

Tin tags.
Tools of trade, not being machinery, and tool handles.
Tools—carpenters', blacksmiths', painters', butchers', gardeners', engineers', agricultural, &c.
Tortoiseshell.
Trees.
Turpentine.
Twine, being sewing and seaming, of hemp, cotton, or flax; also for reapers and binders.
Type-metal.
Type-writing machines and parts thereof.
Vanners.
Vermicelli.
Washers, copper.
Wax, parafine.
Whalebone, not dressed.
Wheels, locomotive.
Wheels, railway waggon.
Willows.
Wire—copper, brass, and silver.
Wire-gauze, fine.
Wire—iron and steel (not galvanized).
Wire rope.
Wool.
Woolpacks.
Yams.
Yeast.
Yellow metal in sheets.
Yellow metal nails, muntz.
Zinc plates.
Zinc, unmanufactured and sheet.

The revenue derived from imported spirits during the past ten years was:—

Revenue from Imported Spirits.

Year.	Quantity on which duty was paid.	Duty.	Amount of duty collected.
	Gallons.		£
1882	1,154,720	12s.	692,832
1883	1,194,650	12s.	716,790
1884	1,239,495	12s.	743,697
1885	1,204,790	12s.	722,873
1886	1,161,628	12s.	696,977
1887	1,121,101	12s., 14s., 15s.	759,608
1888	1,178,293	14s. and 15s.	806,938
1889	1,164,360	14s. and 15s.	804,426
1890	1,196,561	14s. and 15s.	827,314
1891	1,241,503	14s. 15s. and 20s.	869,513

Spirits subject to excise.

Colonial distilled spirits are subject to an excise equal to the duty on imported spirits. In 1884 the quantity subject to excise was 17,709 gallons, on which £10,625 was paid. In the following year the quantity fell to 14,242 gallons, and the amount of excise to £8,545. In 1886 the quantity fell still further, being only 9,733 gallons, and the excise £5,846; but in 1887, notwithstanding the increased duty levied, the quantity subject to excise increased to

15,762 gallons, and the amount of duty to £10,754. In 1891 the duty collected amounted to £23,807 on 34,009 gallons of spirit distilled.

Duty on wine.

Still wine is subject to an import duty of 5s. per gallon, and sparkling wine to 10s. per gallon. The import of the first named is less now than it was ten years ago, but owing to the increase in the duty in 1879 from 4s. to 5s. per gallon, the Customs revenue has been fairly maintained. The amount of still wine imported during 1891 was 152,142 gallons, on which £38,036 duty was paid. The duty on sparkling wine was raised to 10s. per gallon in 1879, at which rate it now remains. The quantity of sparkling wine during 1891 on which duty amounting to £11,332 was collected was 22,664 gallons.

Australian wine checks import.

The growing favour in which Australian wine is held will probably have the effect of checking any considerable importations of foreign wine, and no large increase in the amount of duty, beyond that now received from such wine, can therefore be expected. The quantity imported showed a fair increase up to the end of 1885; but the recent general depression having probably limited the amount of money available for luxuries of this kind, the duty paid has of late years somewhat fallen.

Beer imported.

The import of ale and beer was larger during 1891 than in any previous year, the quantities of beer imported, on which duty was paid, being 1,017,617 gallons in wood, and 1,481,681 gallons in bottle, or a total of 2,499,298 gallons, paying duty to the amount of £81,003, at the rate of 6d. per gallon for beer in wood or jar and 9d. for bottled. The excise duty on beer brewed in the Colony is at the rate of 3d. per gallon. It was first collected for the second half-year of 1887, and amounted to £63,565, the quantity on which duty was paid being 5,085,217 gallons; in 1890 excise duty amounting to £120,245 was collected on 9,619,600 gallons and in 1891 £132,425 on 10,594,020 gallons. As a set-off against the duty thus imposed, no duties are levied on hops and malt.

Tobacco duty.

The duties levied on tobacco imported into the Colony during 1886 were, on the manufactured article, 3s. per ℔.; on tobacco for manufacturing purposes if delivered from Bond to any licensed Tobacco Manufactory, 1s. per ℔.; on the leaf if delivered from Bond for Home Consumption, and not to any licensed Factory, 3s.; and on cigars and cigarettes, 6s. The excise on tobacco made in the Colony is 1s. 3d. per ℔., and on cigars and cigarettes, 2s. 6d. The total amount of import and excise duties collected on tobacco and cigars during 1891 was £409,069, which was the largest ever received.

Excise on tobacco.

Excise duties were first levied on tobacco manufactured in the Colony in 1884, and the amount collected annually since then was:—

Year.	Tobacco.	Cigars and Cigarettes.	Year.	Tobacco.	Cigars and Cigarettes.
	£	£		£	£
1884	68,000	490	1888	128,899	1,038
1885	106,658	863	1889	123,212	1,150
1886	102,212	668	1890	118,287	2,806
1887	127,545	1,284	1891	123,937	7,425

During the last few years since the duty was increased the revenue derived from the imported leaf has steadily declined, its place being supplied by leaf grown in the Colony. To meet this falling off, the excise duty levied on colonial-made tobacco entered for home consumption was increased, in March, 1887, from 1s. to 1s. 3d. per ℔. If the American leaf, which is subject to a duty of 1s. per ℔., were used exclusively in the manufacture of tobacco in the local factories, the actual duty paid on the finished product would have been, previous to the alteration in the tariff, 2s. per ℔. and 2s. 3d. since the alteration, as against 3s. for the imported article. Such, however, is not the case—large quantities of locally-grown leaf are used, and the absolute amount of duty paid per lb. on the tobacco made in the Colony, otherwise than cigars and cigarettes, was 1s. $5\frac{7}{25}$d. in 1887, 1s. $6\frac{1}{2}$d. in 1888, 1s. $6\frac{13}{50}$d. in 1889, 1s. $6\frac{7}{12}$d. in 1890, and 1s. $6\frac{9}{10}$d. in 1891. This subject is more fully dealt with in the subsequent chapter on "Agricultural Production."

Revenue from tea.

The duty on tea, which was 3d. per lb., was abolished in March, 1892, three months after the present tariff came into force. The amount of revenue per head derived from the duty has varied very little from year to year, except, perhaps, in 1891, when the increase over the previous year's figures was large. The revenue received from this source for the last ten years was :—

Revenue from Tea.

Year.	Amount.	Year.	Amount.
	£		£
1882	87,829	1887	106,815
1883	75,713	1888	100 617
1884	100,059	1889	108,954
1885	98,915	1890	106,986
1886	105,979	1891	120,326

Duty on sugar.

Refined sugar coming into the Colony is subject to a duty of 6s. 8d. per cwt., but the Commissioners of Customs only include loaf sugar under this heading. The quantity imported during 1891 was 3,744 cwt., paying duty to the amount of £1,248. Duty is levied on raw sugar, which includes all the ordinary sugar of trade at the rate of 5s. per cwt., but notwithstanding this duty, and the large area of the Colony adapted for sugar-growing, the imports are considerable.

Revenue from Raw Sugar.

Year.	Quantity.	Amount.	Year.	Quantity.	Amount.
	Cwt.	£		Cwt.	£
1882	182,356	45,589	1887	520,192	130,048
1883	203,496	50,874	1888	470,668	117,667
1884	591,632	147,908	1889	642,880	160,720
1885	554,064	138,516	1890	558,540	139 ,6
1886	484,592	121,148	1891	519,725	129,931

Duties on other articles.

The other articles in the specific list which yielded most revenue in 1891 were—timber, which yielded £92,413; galvanized iron and manufactures, £89,580; oils, kerosene and other, £74,297; fruits, green and preserved, £63,109; cement, £30,036; opium, £29,022; salt, £28,198; candles, £21,232; fish—dried and preserved, £18,346; rice, £16,928; jams and jellies, £15,779; paints, colours, and varnish, £13,192; milk—condensed and preserved, £12,480; bacon and hams, £11,355; cocoa and chocolate, £11,177; other articles, £96,880; these amounts, together with those already given on spirits, wines, beer, tobacco, tea, and sugar, making up the amount of specific duties collected, viz., £2,123,120.

Amount of import and excise duties.

The total Import and Excise Duties collected for the first half year of 1891, amounted to £1,173,197, or £1 0s 9d per inhabitant, and for the corresponding period of 1892 the amount was £1,545,292, or £1 6s 3d per inhabitant; the amount given for the 1892 half year shows an increase of £372,095 over the 1891 period, including £343,659 collected as *ad valorem* duties. Nothwithstanding the increased Customs Tariff, the people of New South Wales are more lightly taxed than those of any of the other Australasian Colonies. In Victoria the Customs and Excise revenue per inhabitant for 1891 was £2 6s 1d., while that of New South Wales was £2 2s 11d for the same year. These amounts per inhabitant are lower than those of any other of the Australasian Colonies. The amount received under the new specific duties from the 2nd December, 1891, the date when they were first enforced, to the end of the year, was £11,311, and the revenue collected under the *ad valorem* duties was £40,500, of which sum £31,470 was received under the 10 per cent., and the balance £9,030 under the 15 per cent. duties. The total Customs revenue collected, excluding miscellaneous collections paid direct into the Treasury, was £2,537,440.

Australasian customs revenue.

During 1891, the revenue derived from the Custom-house, exclusive of excise, harbour dues, &c., in each Colony in Australasia was—

New South Wales...	£2,163,620	Western Australia ...	£233,777
Victoria	2,503,438	Tasmania	378,951
Queensland............	1,210,653	New Zealand	1,560,702
South Australia	696,868		

Customs Revenue collected at Sydney, Outports, and Inland Stations, during the year 1891.

Stations.	Amount.	Stations.	Amount.
	£		£
Sydney	2,099,886	Morpeth	15,060
		Mulwala	2,022
Albury	32,301	Newcastle	166,048
Barringun................	740	Richmond River	187
Boggabilla	164	Silverton	6,555
Bourke	29,320	Swan Hill Crossing...	1,052
Cobar	1,119	Tocumwal..............	2,512
Corowa	7,952	Tweed River	123
Deniliquin..............	12,802	Wallangarra............	940
Eden	28	Wentworth	11,278
Euston	1,277	Wilcannia..............	21,061
Grafton	454	Willyama	98,775
Howlong	1,323	Wollongong	119
Kiama	2		
Moama	24,340	£	2,537,440

The amounts shown on the next page, as collected by the Treasury, or as collected by the Customs Department, and paid direct into the Treasury, are not included in this table.

Revenue from customs and excise

The amount of revenue collected by the Customs, including excise, during each of the last five years, is given in the next two pages.

Revenue Collected by the Department of Customs.

Particulars of Receipt and Rate of Duty.		Amount Collected.				
		1887.	1888.	1889.	1890.	1891.
IMPORT DUTIES.		£	£	£	£	£
Spirits	₩ gallon, †20s.	....	....	....	....	412
	,, 15s.	4,412	4,725	5,163	4,798	5,049
	,, 12s.	152,744	....	....	....	....
	,, 14s.	602,452	799,097	794,875	818,276	864,052
Methylated Spirits	,, 2s.	593	....	....	....	....
	,, 4s.	2,688	4,124	4,388	4,240	4,486
Wine—Still	,, 5s.	35,395	39,157	37,300	35,789	38,036
Wine—Sparkling	,, 10s.	9,726	11,937	10,663	10,317	11,332
Ale and Beer in wood	,, 6d.	21,047	26,386	28,534	25,477	25,440
Ale and Beer in bottle	,, 9d.	48,166	50,917	51,497	46,124	55,563
Tobacco—Manufactured	₩ lb., 3s.	75,603	89,662	107,364	118,130	140,716
Tobacco in leaf	,, 3s.	1,052	544	809	618	512
Tobacco for Manufacturing purposes only	,, 1s.	27,611	30,524	27,287	28,471	31,957
Cigars	,, 6s.	63,799	68,335	73,961	75,287	81,308
Cigarettes	,, 6s.	13,373	17,912	21,587	22,630	23,214
Sugar—Refined	₩ cwt., 6s. 8d.	1,840	1,377	1,014	1,249	815
Sugar—Raw	,, 5s.	84,073	72,907	73,146	72,992	87,481
Molasses	,, 3s. 4d.	1,455	909	1,030	965	883
Sugar Refined ex Refinery	,, 6s. 8d.	37	127	260	360	433
Sugar Raw ex Refinery	,, 5s.	45,975	44,760	87,574	66,643	42,450
Molasses ex Refinery	,, 3s. 4d.	1,534	1,867	3,133	2,800	3,200
Tea	₩ lb., 3d.	106,815	100,617	108,954	106,986	120,326
Coffee	,, 3d.	6,451	6,437	6,628	6,214	6,422
	,, 6d.	2,160	2,109	1,981	2,510	2,733
Chicory	,, 3d.	2,479	255	1,480	1,249	115
	,, 6d.	2,038	1,863	1,166	841	593
Opium	,, 20s.	21,683	22,052	24,258	16,990	29,022
Rice	₩ ton, 60s.	18,478	19,081	17,480	15,947	16,928
Dried Fruits	₩ lb., 2d.	56,347	58,554	55,523	57,172	59,298
Nuts	,, 1d.	731	....	....	....	....
Malt	₩ bushel, 6d.	....	....	....	....	....
	,, 9d.	5,888	....	....	....	....
Hops	₩ lb., 3d.	....	....	....	....	....
	,, 6d.	7,536	....	....	....	....
Sarsaparilla	₩ gallon, 4s.	293	435	280	262	332
	,, 12s.	14	....	....	....	....
	,, 14s.	53	142	150	324	392
Duty collected on Samples of spirits		133	116	106	122	118
Other Specific Duties*		351,300	394,166	350,334	335,303	469,502
Ad valorem Duties*		226,743	3	....	....	40,500
TOTAL IMPORT DUTIES		2,002,717	1,871,097	1,897,925	1,879,086	2,163,620

* For Schedule of Customs Duties for 1891, see page 220.

† From 2nd December, 1891.

Revenue Collected by the Department of Customs—*continued.*

Particulars of Receipt and Rate of Duty.	Amount Collected.				
	1887.	1888.	1889.	1890.	1891.
EXCISE.	£	£	£	£	£
Colonial Distilled Spirits ℔ gal., 12s.	1,685	....	....	....	....
Colonial Distilled Spirits „ 14s.	9,068	11,978	16,691	23,174	23,806
Excise on Tobacco .... ℔ lb., 1s.	26,627	....	....	....	....
Excise on Tobacco .... „ 1s. 3d.	100,918	128,899	123,212	118,287	123,937
Excise on Cigars and Cigarettes .... „ 2s. 6d.	1,284	1,038	1,150	2,806	7,425
Excise on Beer .... ℔ gal., 3d.	63,565	116,253	118,940	120,245	132,425
Tobacco Factory License Fees......	1,306	1,375	1,377	1,376	1,265
Tobacco—Licenses to Sell	....	....	....	84	626
TOTAL EXCISE	204,453	259,543	261,370	265,972	289,484
MISCELLANEOUS COLLECTIONS.					
Tax on Chinese	17,980	4,710	100	300	100
Bonded Warehouse License Fees....	8,766	8,401	8,752	8,694	8,575
Rent of Goods in Queen's Warehouse	61	71	47	67	63
Pilotage	28,628	36,797	39,377	32,258	40,612
Harbour and Lights Rates..........	14,676	19,416	19,540	17,344	20,331
Removal Dues	4,297	5,465	6,457	3,973	5,393
Shipping Fees—Engaging and Discharging Seamen‡	2	8	9	6	4
Crown's Share of Seizures and Penalties‡	528	1,107	35	226	1,230
Surplus Proceeds, Sale of Overtime Goods‡	608	570	297	1,091	479
Surcharges‡	83	32	11	8	15
Tonnage and Wharfage Rates	7,059	6,945	8,293	7,002	9,257
Fisheries Royalty..................	1,422	7	....	....	....
Proceeds of sale of Naphtha‡	40	21	39	26	1
Sundries‡	156	84	353	218	316
TOTAL MISCELLANEOUS COLLECTIONS	84,306	83,634	83,310	71,213	86,376
TOTAL CUSTOMS REVENUE.......£	2,291,476	2,214,274	2,242,605	2,216,271	2,539,480

‡ Collected by Customs Department and paid direct into the Treasury.

FARES AND FREIGHTS.

Looking at the extensive passenger traffic and shipping trade of New South Wales, it would naturally be expected that a liberal scale of fares and freights would be in force, and this will be found actually to exist. In many instances, indeed, the inter-colonial rates have been extremely low, owing to the keen competition among the various steamship companies. The following figures will give an idea of the average passenger rates during 1892 :—

Colonial Fares.

New South Wales Ports.—Bateman's Bay, £1 5s. first-class, 12s. 6d. second-class; Bellinger River, £2 and £1; Byron Bay, £2 and £1; Clarence River, £2 and £1; Eden, £1 10s. and 15s.; Gosford, 2s. 6d.; Kiama, 7s. 6d. and 4s.; Macleay River, £1 10s. and 15s.; Manning River, £1 10s. and 15s.; Nambucca River, £1 10s. and 15s.; Newcastle, 7s. and 4s.; Port Macquarie, £1 10s. and 15s.; Richmond River, £2 5s. and £1 2s. 6d.; Shoalhaven, 15s. and 10s.; Ulladulla, £1 and 10s.; Wollongong, 5s. and 2s. 6d.

Intercolonial Fares.

Australasian Ports.—Victoria: Melbourne, 40s. and 10s. Queensland: Bourketown, £18 and £11; Bowen, £8 and £5; Brisbane, £3 and £1 10s.; Bundaberg, £5 and £2 10s.; Cairns, £9 and £6; Cooktown, £10 10s. and £7; Mackay, £7 and £4 10s.; Maryborough, £4 and £2; Mourilyan Harbour, £9 17s. 6d. and £6; Normanton, £16 and £10; Rockhampton, £6 and £3 10; Townsville, £8 and £5; Thursday Island, £15 and £9. South Australia: Adelaide, £3 10s. and £1 10s.; Port Darwin, £18 and £9; Port Pirie, £3 10s. and £2. Western Australia: Albany, £9 15s. and £6 10s.; Freemantle, £11 5s. and £7 10s. Tasmania: Hobart, £2 10s. and £1 5s. New Zealand: Auckland, £7 and £3 10s.; Dunedin, £9 and £5; Lyttleton, £8 10s. and £4 10s.; Napier, £8 10s. and £4 10s.; Wellington, £7 and £3 10s.

Fares to Europe.

European Ports.—Bremen, £57 10s., £30, and £14; Brindisi, £50 to £65, and £30 to £35; Gibraltar, £52 to £65 and £28 to £35; London, £55 to £70, £30 to £37, and £17 17s.; Marseilles, £55 to £65, £30 to £40, and £20; Venice, £55 to £65, and £30 to £35; Naples, £50 to £65, and £25 to £32.

Fares to Eastern Ports.

Eastern Ports.—Aden, £45, £30, and £15; Bombay, £40 and £25; Calcutta, £40 and £25; Colombo, £40 and £25; Hong Kong, £33 and £15; Japan, Yokohama, £40 19s. and £23 2s. 6d.; Java, £26 and £13; Penang, £42 and £24; Port Moresby, £22 10s. and £14; Shanghai, £39 and £20; Singapore, £40 and £22; Mauritius, £53, £35, and £17; Port Said, £45 to £55, £25 to £32, and £19 8s.; Reunion, £52, £35, and £17 12s.

Pacific Ports.—San Francisco, £40 and £20; Honolulu, £30 and £16; Fiji, £12 10s. and £7 10s.; Noumea, £7 and £4. New Hebrides: Aneityum, £10 10s. and £6; Havannah Harbour, £12 and £7; Tonga, £16, £9 10s., £4 10s.; Samoa, Apia, £20, £11 10s., £5.

Fares to Ports in the Pacific.

Fares by Sailing Vessels are in nearly every instance a matter of private arrangement between the Captain of the vessel and the intending passenger, but the number of such passengers is becoming smaller from year to year owing to the great decrease of steamer fares. Fares to London are however given as £35 to £42 first class, and £20 to £25 second class, and to San Francisco as £30 first class and £15 to £20 second class.

Fares by Sailing Vessels.

The freights paid for the carriage of wool to London determine, within certain limits, the freight of most other produce. The present average cost of carriage of greasy wool to London is $\frac{7}{16}$d. per lb.; in 1834 the average was somewhat over 3d. Information regarding freights is not available for early years, but since 1857, as the following figures show, the freights on wool have been very low, and remarkably steady. The values are in every case for sailing ships, as the practice of shipping wool by steamers was by no means general until very recent years:—

Freights on Wool.

Freights on Pressed Greasy Wool per lb.

Year.	Freight.	Year.	Freight.	Year.	Freight.
1857	$\frac{5}{8}$d.	1869	$\frac{1}{2}$d.	1881	$\frac{7}{8}$d.
1858	$\frac{5}{8}$d.	1870	$\frac{5}{8}$d.	1882	$\frac{5}{8}$d.
1859	$\frac{5}{8}$d.	1871	$\frac{5}{8}$d.	1883	$\frac{1}{2}$d.
1860	$\frac{5}{8}$d.	1872	$\frac{5}{8}$d.	1884	$\frac{5}{8}$d.
1861	$\frac{5}{8}$d.	1873	$\frac{5}{8}$d.	1885	$\frac{5}{8}$d.
1862	$\frac{3}{4}$d.	1874	$\frac{5}{8}$d.	1886	$\frac{5}{8}$d.
1863	$\frac{5}{8}$d.	1875	$\frac{5}{8}$d.	1887	$\frac{5}{8}$d.
1864	$\frac{5}{8}$d.	1876	$\frac{1}{2}$d.	1888	$\frac{7}{16}$d.
1865	$\frac{1}{2}$d.	1877	$\frac{5}{8}$d.	1889	$\frac{7}{16}$d.
1866	$\frac{5}{8}$d.	1878	$\frac{7}{16}$d.	1890	$\frac{7}{16}$d.
1867	$\frac{3}{4}$d.	1879	$\frac{1}{2}$d.	1891	$\frac{7}{16}$d.
1868	$\frac{9}{16}$d.	1880	$\frac{11}{16}$d.		

The following table of freights calls for no particular comment, as prices have remained fairly uniform for several years, except when slightly affected by temporary causes:—

General Freights.

FREIGHTS from Sydney to London per sailing and steam vessels.

Year.	Vessel.	Wool (Greasy).	Tallow.	Copra.	Leather.	Hides.	Preserved Meats.	Measurement Goods.
		per lb.	per ton (20 cwt.)	per ton (20 cwt.)	per ton (20 cwt).	per ton (20 cwt.)	per 40 c. feet.	per 40 c. feet.
1885	Sailing	From ¼d. to ⅜d. Average, 5/16d.	From 25/- to 40/- Average, 31/-	From 35/- to 40/- Average, 37/6	40/-	From 15/- to 20/- Average, 17/6	25/-	25/-
	Steam	From ⅜d. to ½d. Average, 7/16d.	40/-	....	From 40/- to 45/- Average, 42/6	....	35/-	35/-
1886	Sailing	From 5/16d. to ⅜d. Average, ⅜d.	From 20/- to 25/- Average, 23/-	From 25/- to 30/- Average, 28/-	From 30/- to 35/- Average, 33/-	15/-	25/-	25/-
	Steam	From ⅜d. to ¾d. Average, ⅝d.	30/-	....	From 30/- to 70/- Average, 50/-	17/6	From 30/- to 70/- Average, 44/-	From 30/- to 70/- Average, 44/-
1887	Sailing	From 5/16d. to ⅜d. Average, ⅜d.	From 22/6 to 30/- Average, 26/-	From 25/- to 35/- Average, 30/6	From 30/- to 35/- Average, 33/-	From 15/- to 20/- Average, 16/6	25/-	25/-
	Steam	From ⅜d. to ⅝d. Average, ½d.	From 30/- to 45/- Average, 36/6	....	From 40/- to 50/- Average, 45/-	....	....	From 25/- to 45/- Average, 35/-
1888	Sailing	From 5/16 to 7/16d. Average, ⅜d.	From 25/- to 45/- Average, 37/-	From 47/6 to 50/- Average, 49/-	From 30/- to 45/- Average, 36/-	20/-	From 25/- to 30/- Average, 26/6	From 25/- to 30/- Average, 26/-
	Steam	From ½d. to ¾d. Average, ⅝d.	From 30/- to 52/6 Average, 42/6	....	From 35/- to 50/- Average, 42/6	....	30/-	60/-
1889	Sailing	From 5/16 to 7/16d. Average, ⅜d.	From 25/- to 45/- Average, 33/6	From 32/6 to 50/- Average, 36/-	From 27/6 to 45/- Average, 36/6	From 15/- to 20/- Average, 16/-	22/6	From 20/- to 25/- Average, 22/6
	Steam	From ½d. to ¾d. Average, ⅝d.	From 25/- to 50/- Average, 37/6	50/-	From 40/- to 60/- Average, 50/-	....	....	....
1890	Sailing	From ⅜d. to ½d. Average, 7/16d.	From 32/6 to 47/6 Average, 35/-	From 32/6 to 47/6 Average, 42/-	From 35/- to 45/- Average, 40/-	From 15/- to 25/- Average, 17/6	From 25/- to 30/- Average, 27/6	From 25/- to 35/- Average, 27/6
	Steam	From ½d. to ⅝d. Average, ⅝d.	From 35/- to 50/- Average, 40/-	From 45/- to 50/- Average, 46/-	From 45/- to 60/- Average, 50/-	....	30/-	60/-
1891	Sailing	From ¼d. to 7/16d. Average, 7/16d.	From 26/- to 45/- Average, 35/6	From 35/- to 47/6 Average, 41/3	From 27/6 to 40/- Average, 33/9	From 20/- to 30/- Average, 22/6	From 17/6 to 25/- Average, 21/3	From 22/6 to 45/- Average, 30/-
	Steam	From 7/16d. to ¾d. Average, ⅝d.	From 32/6 to 45/- Average, 38/9	From 35/- to 45/- Average, 40/-	From 32/6 to 50/- Average, 41/3	From 30/- to 35/- Average, 32/6	....	From 32/6 to 60/- Average, 46/3

PART X.

Settlement.

Various systems of land alienation.

THE systems adopted for the settlement of an industrial population on the lands of New South Wales have been many, and have differed widely according to the various stages of the Colony's progress and development. In the first period of settlement land was alienated by grants, orders, and dedications, the power of disposing of the Crown lands resting solely with the Governor. In this way grants, frequently of extensive areas, were made in favour of naval and military officers and men, and free immigrants. Regulations for the sale of lands and town allotments were promulgated on the 1st of August, 1831, in which the principle of sale by auction was introduced, the minimum price of country lands being then fixed at 5s. per acre. This minimum was raised to 12s. per acre in the year 1839, and two years afterwards it was increased to 20s. in the district of Port Phillip, the minimum price of 12s. per acre being resumed for the whole Colony in the following year. It was again increased in 1843 to 20s. per acre, with liberty to select at the upset price country portions offered and not bid for, or when the deposit was forfeited. The principle of selection appears therefore for the first time at that date in the land legislation of New South Wales, but limited to portions of land already measured for sale at auction. This system lasted until the abrogation of the Order in Council, and the introduction of new legislation by the Parliament of New South Wales. The following data show the progress of land alienations at various epochs up to the date upon which the Act of 1861 became law:—

	acres.
Area alienated under Surveyor-General Oxley previous to 1st January, 1828	1,617,542
Total area of land alienated as per return and Government map, 1837	4,418,758
Total area of land alienated in all forms previous to 1861	7,338,539

The conditions of colonization greatly altered under the powerful attraction of the gold-fields, and after the first excitement of the rush for gold had died out the question of land settlement had to be dealt with in an entirely new spirit, to meet the wants of a class of immigrants of a different type to those contemplated by former enactments, the result being the passing of the Crown Lands Act of 1861, under the leadership of Sir John Robertson. Before this Act became law the conditions of settlement rendered it difficult for men of small means to establish themselves with fair chances of success. The new measure aimed at facilitating the settlement of an industrial agricultural population, side by side with the pastoral tenants, and, with this view the Act introduced a principle entirely new to the land legislation of the Colony, namely, that of free selection, in limited areas, *before survey*. To this privilege was attached the condition of *bonâ fide* residence, and the land was to be sold at a fixed price, payable by instalments, or partly remaining at interest. The principle of unconditional sales was, however, maintained, and during the twenty-three years the Act of 1861 was in operation there were sold 23,470,140 acres conditionally, and 15,572,001 acres by auction, improvement purchase, or otherwise without conditions; the total area alienated being 39,042,141 acres. In a very large number of cases the land selected, or purchased, reverted to the State, so that the absolute area sold, or in process of sale, when the Act of 1884 came into force, amounted to only 32,819,023 acres, besides 7,338,539 acres alienated previously to 1861.

Crown Lands Act of 1861.

Pastoral Occupation.

The occupation for pastoral purposes of the waste lands of New South Wales was at first allowed under a system of yearly licenses. Under the old squatting regulations any person was at liberty to apply for such a license to occupy runs the extent of which was only limited by the boundaries of the surrounding stations, the licensing fee being fixed at £10 per year for a section of 25 square miles, or 16,000 acres in extent, £2 10s. per annum being charged for every five additional square miles.

The Imperial Act of the 9th March, 1847, which rendered it lawful for the Queen, by any Order in Council, to make and establish such regulations as should seem meet for the sale and occupation of the waste lands, was immediately followed by an order introducing an entirely different system in the legislation for the pastoral occupation of lands in New South Wales. Hitherto the tenure had been a yearly one, and the fee was paid on the extent of land occupied by the squatter. For this system was substituted a fixity of tenure of the leases, and the license was calculated upon the stock-carrying capacity of the runs. Under the regulations promulgated in 1847 the country was divided into three parts—the settled, the intermediate, and the unsettled districts. For the latter division the term of the pastoral leases was fixed at a period of fourteen years; in the intermediate division this term was reduced to eight years, and in the settled districts the yearly tenure was retained. The licensing fee was charged at the rate of £10 for 4,000 sheep, or a proportional number of cattle—which was the minimum at which the stock carrying capabilities of a run could be assessed—and £2 10s. was charged for every additional 1,000 sheep or the proportion of cattle which the run was estimated to carry. In the settled districts lands were let for pastoral purposes only, in sections of not less than 1 square mile in area, the annual rental for each section being fixed at 10s. The holders of alienated lands were permitted to depasture their stock upon Crown lands adjoining their holdings free of charge, this permission, however, constituting only a commonage right. The Occupation Act of 1861, which abolished the Orders in Council, inaugurated a new system, which limited the tenure of pastoral leases to five years in the unsettled, and intermediate or second-class settled districts, leaving the whole of the pastoral leases open to the operations of the free selectors. The evils resulting from this system led Parliament to adopt in 1884 and 1889 the measures at present in force, the provisions of which, with regard to pastoral occupation, are described further on.

Occupation Act of 1861.

CROWN LANDS ACTS OF 1884 AND 1889.

Free selection before survey.

The Act of 1861 was, after many amendments, finally superseded by that of 1884, with the supplementary enactment of 1889. Though differing widely from the former Act in many important particulars these measures maintain the principle of free selection before survey, but with one essential difference. Under the original Act the whole area of the Crown lands of the Colony was thrown open to free selection, and the lands held under pastoral leases were not exempted from the operation of the law. Thus were created considerable difficulties between the two principal classes of settlers—the squatters and the selectors. While maintaining the principle of selection before survey, the aim of the Acts of 1884 and 1889 was to give fixity of tenure to the pastoral lessees and obtain a larger rental from the public lands, at the same time restricting the area sold unconditionally. The Act of 1884 became law on the 1st January, 1885, and that of 1889 came into operation on the 1st of December of that year.

Territorial divisions.

Under these measures the whole Colony is subdivided into three natural divisions, each of which is further subdivided into various land districts, one or more such districts forming local divisions, the administration of which is entrusted to a Local Land Board, composed of a chairman and not more than two assessors. In each land district resides a land agent, whose duty is to receive all applications for land, in accordance with certain regulations having the force of law. The decisions of the Local Land Boards may be appealed against to the Land Court. The composition of the Land Court involved one of the principal innovations introduced in the land legislation of the Colony by the Act of 1889; by its constitution and powers it is intended to free the administration of the law from political interference. This Court is composed of a President and two members appointed by the Executive, whose decisions in matters of administration have the force of judgments of the Supreme Court; but whenever questions of law become involved, a case may be submitted to the Supreme Court, either upon the written request of the parties interested, or by the Land Court acting of its own accord. The judgments given on this appeal are final. The conditions of alienation and pastoral occupation of Crown lands differ in each of the three divisions above named.

EASTERN DIVISION.

Boundaries and area.

The eastern division has an area of 60,452,000 acres, and includes a broad belt of land comprised between the sea-coast and a line nearly parallel thereto. This line starts from a point midway between the small settlements of Bonshaw and Bengalla on the Dumaresq River, on the northern frontier, and terminates at Howlong on the river Murray, and thus embraces the coastal district of the Colony, as well as the northern and southern tablelands. In this division lie all the original centres of settlement, and the markets of the Colony are more readily accessible to it than to the other districts. In it, moreover, is to be found some of the best agricultural land of the Colony. For these reasons, the conditions for the purchase and occupation of the Crown lands are more restricted than is the case in the central and western divisions; nevertheless, every person above the age of 16 may, upon any part of the Crown lands not specially exempted from purchase, select an area from 40 to 640 acres in extent, together with a conditional lease of contiguous land, which cannot exceed thrice the area of the conditional purchase. The price demanded by the State is a uniform one of £1 per acre, 2s. per acre being deposited on making the application, and the rest paid by instalments of 1s. per acre per year, together with interest of 4 per cent. on the unpaid balance. The instalments begin at the end of the third year, but the whole of the balance may be paid in one sum at the selector's option, when he has completed the term of *bonâ fide* residence which is imposed upon him during

Conditional purchases.

Condition of fencing and *bona fide* residence.

a continuous period of five years from the date of his taking possession. Within two years from the date of occupation, the selector must fence the boundaries of his conditionally purchased land with a substantial fence, and maintain the same in good order and condition. Upon application to the Land Board, however, he may be allowed to substitute other improvements of a permanent and substantial nature in lieu of fencing. On the completion of his term of continuous residence the selector is at liberty to conditionally purchase additional areas contiguous to his original purchase, in extent from 40 to 640 acres, and may, if he has also a conditional leasehold, purchase the whole of the area of the said leasehold, and, in the case of additional purchases, the conditions as to residence are not required, though that of fencing remains unaltered. Any person over 16 years of age may select, and married women, judicially separated from their husbands, are also allowed to select in their own right. Minors taking up lands adjoining the parents' selection may fulfil the conditions of residence under the parental roof.

Limit of tenure of conditional leasehold.

Conditional leaseholds.—The conditional leasehold, in conjunction with a selection, may be held for a period of fifteen years, at a yearly rental fixed by the Local Land Board, subject to the approval of the Minister, and under conditions of fencing within two years of the date of the confirmation of the application, the one fence, however, being allowed to enclose both the conditional purchase and the lease.

Leases converted into purchases.

Conditional leases may at any time during their currency be converted into additional conditional purchases, and the term of residence on both the original purchase and the lease together need not exceed a period of five years from date of application.

Non-residential conditional purchases.—Land may be selected free from conditions as to residence, but the terms under which land may be thus taken up are more stringent than when the purchase is a residential one. In the first place, the area is limited to a maximum of 320 acres, and no additional conditional

Limit of area.

purchase may be made except for such additional areas, which, together with that of the original purchase, do not exceed this maximum, and no conditional lease may be granted. The property must be fenced in within twelve months after survey, the value of fencing not being included in that of the permanent improvements, which must be made within five years after survey, to the extent of £1 per acre. Moreover, the price demanded by the State has been fixed at £2 per acre, the deposits and subsequent instalments being likewise double the sum required to be paid in the case of ordinary conditional purchases. No person under 21 years of age may select under this clause, and no person having already taken up a non-residential selection, may be permitted to make any other conditional purchase whatsoever under this Act. Residential selectors are also debarred the privilege of taking up additional areas of Crown lands under this clause.

Conditions of fencing and improvements.

Price per acre.

Special areas may also be reserved from the operations of the ordinary conditional purchase clauses of the Act, and may be thrown open to selection under different terms as to payment, and with or without the condition of residence. But, in such special areas, the price of the land cannot be less than £1 10s. per acre, if the selector elect to fulfil the condition of residence, non-resident purchasers being charged double the price demanded from the former, and the maximum area of one such purchase is fixed at 320 acres.

Price and limit of area.

CENTRAL DIVISION.

The central division of the Colony embraces an area of 55,460,000 acres, extending from north to south between the western limit of the eastern division and a line starting from a point on the Macintyre River, where it is crossed by the 149th meridian of east longitude, and following this river and the Darling to the junction of Mara Creek; thence along that creek to the Bogan River, and across to the river Lachlan, between the townships of Euabalong and Condobolin, along the Lachlan to Balranald, and thence to the junction of the Edward River with the Murray, on the frontier of Victoria.

Boundaries and area.

The central division thus embraces the upper basin of the Darling River in the northern part of the Colony, and portions of those of the Lachlan, the Murrumbidgee, and the other affluents of the Murray in the south. This territory has, hitherto, been mainly given over to pastoral occupation; but there is every warrant for supposing that agricultural and pastoral pursuits could successfully be carried on, side by side, over a considerable part of it.

Limit of area, and other conditions.

Conditional purchases and leases.—In this division land may be conditionally purchased under the same terms as to residence, fencing improvements, price, and mode of payment as required in the eastern division; but the limit of an individual selection has been fixed at 2,560 acres, with a corresponding increase of the conditional lease to three times that area. The acreage which may be purchased without residence, as well as the conditions in regard thereto, are the same for the central as for the eastern division.

In *special areas* the maximum extent of a selection has been fixed at 640 acres in the central division.

WESTERN DIVISION.

Limits and area.

The western division comprises the whole of the land situated between the western limit of the central division and the South Australian border. It embraces an area of 79,970,000 acres, watered entirely by the Darling River. This part of New South Wales is essentially devoted to pastoral pursuits. Water conservation, irrigation, and occupation, may in time counteract climatic conditions and irregular rainfall, and make agriculture possible over this large area, as its soil is adapted to the growth of any kind of crop. But legislation in regard to occupation and settlement of the district is based upon the assumption that for many years there will be little inducement for agricultural settlement. Therefore, conditional purchases, except in special areas, are not allowed. Pastoral settlement, in this division, is encouraged in the form of homestead leases.

Pastoral leases.—Under the Act of 1884, the squatters, who had hitherto held runs under leases which did not exempt the land from the operation of the free selection system, were invited to surrender their leases to the Crown, and submit to the subdivision of the unalienated portion of their runs into two equal parts. The one part was returned to the Crown lessee, under an indefeasible lease, for a fixed term of years, according to the geographical division in which the run was situated, while the remaining portion was leased under annual occupation licenses, renewable from year to year, remaining open for selection under the homestead lease clause. The Crown Lands Act of 1889 did not interfere with these provisions, but the tenure of pastoral leases, in the western division only, was fixed at twenty-one years at a rental determined upon an assessment made for seven years and a reassessment made every seventh year of the lease's currency, the term of twenty-one years being susceptible of extension for a further period of seven years if the land has been improved in a satisfactory manner. In the central division the term of pastoral leases extends to ten years, and in the eastern division to five years only; in each case the rent is determined by assessment, but no minimum is fixed in any division. Under the Act of 1884 the Minister for Lands claimed the power of definitely fixing the rental of Crown Leases at a rate other than appraised by the Land Boards. This claim gave rise to contentions and difficulties which were met by the passing of a short measure, known as the "Crown Rents Act of 1890." By the terms of this Act any such case may be referred to the Land Court who determines upon this appeal the proper rate at which rental should have been paid by the applicant under the Crown Lands Act of 1884, from the commencement of the lease, and the proper rate payable until reappraisement or other alterations are made in pursuance of the Acts of 1884 and 1889. In the central division an extension of five years may be granted to the holder of a pastoral lease. Upon the expiration of a pastoral lease the lands comprised therein may be re-let, or may be subdivided and let by auction,

Pastoral tenure of land.

Expiration of pastoral lease.

or tender, as a pastoral lease, or may be resumed by the Government, and all improvements on the land at the expiration of the lease become the property of the Crown, without compensation.

Occupation licenses.—Besides the leases for a fixed period thus granted to run-holders of half the unalienated portions of their runs, licenses may be granted to occupy resumed areas or vacant lands. In this case the application for such occupation license must be made at the time of applying for the pastoral lease, and a deposit made at the rate of £2 per section of 640 acres, part of which sum may be refunded when the license fee is fixed by the Minister, after appraisement. These occupation licenses are granted only for a term of one year, and do not exempt the land from the operations of other clauses of the Land Act.

Deposit and term.

Homestead leases.—In the western division, homestead leases with a currency of fifteen years may be granted within the resumed areas or vacant lands. The portion which may be taken up under this clause cannot be less than 2,560 acres, nor more than 10,240 acres. These leases are granted upon application at the Lands Office, and on payment of a deposit equal to 1d. per acre of the area applied for. The applicant must reside upon his lease for a period of at least six consecutive months during each of the first five years of his lease. During the first two years of occupation the lessee must enclose the whole of the lease, with a fence according to a prescribed design; but the the Land Board may under certain circumstances, grant an exemption from fencing provided other substantial improvements are erected in lieu thereof. On the expiration of the term of fifteen years, above mentioned, an extension of seven years may be granted, if it appears to the Land Board that the carrying capacity of the land has been improved, or that the conditions imposed by the Act have been satisfactorily fulfilled and the land benefited. At the end of the final term the homestead lease may be again leased as such by auction or tender, but the out-going tenant is not entitled to compensation for improvements. Persons who obtain homestead

Condition of occupation and fencing.

Term of lease.

leases are, however, required to pay for existing improvements on the land thus leased, at a valuation made under the direction of the Local Land Board. Holders of pastoral leases are not permitted to hold homestead leases, neither can any person hold, or cause to be held on his behalf, more than one such lease.

Scrub leases.—Besides pastoral and homestead leases, other leases are granted under the Act for special purposes. On the recommendation of the Local Land Board the Minister may declare any Crown lands wholly or partly covered with scrub or noxious undergrowth, to be scrub land, and such may be leased for a term not exceeding twenty-one years, and in areas not exceeding 10,240 acres, and not less than 640 acres to any person, subject to rental fixed by assessment. Every holder of a scrub lease is required to commence destroying the scrub within three months after the commencement of the lease, and take all such steps for this object as the Local Land Board may from time to time direct.

Minister may proclaim scrub lands.

Limit of area and terms of tenure.

Lands covered with snow during part of the year may be leased in areas not less than 1,280 acres, and not exceeding 10,240 acres, for a term of seven years, with a right of extension for three years more, subject to an annual rental determined by the Local Board. Lands which, in consequence of their inferior character or isolated position, may not have been held under tenure, or have been abandoned, may be leased by auction or tender for a period not exceeding twenty years.

Leasing of snow lands.

Leases of inferior lands.

Upon application by the holder of a pastoral lease for permission to bore or search for water upon the land held under an occupation license, an area not exceeding 10,240 acres in one block on the resumed area may be temporarily exempted from sale or lease, and in the event of artesian water in sufficient quantity being discovered, the said area may be held under a fixed lease, the term of which may not exceed the currency of the pastoral lease.

Leases for the protection of artesian wells.

Annual leases.

Annual leases are also granted for pastoral purposes in areas not exceeding 1,920 acres for any Crown lands, by auction or tender, at a minimum annual rental of £2 for every section of 640 acres.

Residential leases may also be granted for periods not exceeding fifteen years, of areas not exceeding 10 acres of Crown lands within gold and mineral fields to holders of miners' rights and licenses, for the purpose of *bonâ fide* residence, upon such terms as may be prescribed as to rent, erection of fences, and buildings.

In addition to the various forms of alienation and occupation of the Crown lands described above, land may be sold in the three divisions of the Colony under the following provisions:—

Sales by auction.

Auction sales.—Crown lands, not exceeding 200,000 acres in the aggregate for the whole Colony in any one year, may be sold by auction. The upset price for such land is notified by the Minister, and is fixed by law at not less than £8 per acre for town lands, £2 10s. for suburban lands, and £1 for other lands. A deposit equal to 25 per cent. of the purchase money is required, and the balance must be paid within three months after the sale.

Gold-field purchases.

Purchases on gold-fields.—On gold-fields any person in duly authorized occupation under the Mining Act may purchase the portion so occupied, without competition, in virtue of the improvements made on the land, at a price to be fixed by the Land Board, being not less than at the rate of £8 per acre for town lands, and £2 10s. for suburban or other lands, or £2 10s. for any area less than 1 acre; but the maximum which may be so purchased is one quarter of an acre for town lands, and 1 acre for other lands.

Special sales.

Special sales, without competition, in the case of rescission of water frontages, reclamation of land by proprietors of adjoining lands, and in other special cases, may also be made under conditions which are at the discretion of the Minister for Lands in the metropolitan district, and of the Local Land Boards in the other districts. The Act also provides for special leases on the shores of the sea, lakes, harbours or rivers, as well as for cutting and removing timber from Crown lands.

LAND REVENUE.

Revenue received since 1861.

Under the old system of Lands Alienation, and since the year 1862, when the Lands Act of 1861 came into force, there has been received into the National Treasury from the proceeds of lands alienated the following sums :—

Description of Land Alienated.	Amount received.
	£
Lands alienated before the 1st January, 1862 (approximate)	1,818,312
Lands sold in fee-simple, from 1st January, 1862, to 31st December, 1891	15,724,845
Deposits, interest, and balance of purchase money on lands sold conditionally from 1st January, 1862, to 31st December, 1891	16,441,623
Total amount paid into the National Treasury...	33,984,780

Amount due to the State.

At the close of 1891 there remained due to the State, on account of unpaid balances on land conditionally purchased, a sum of about £13,671,249 ; so that the total amount of sales from 1862 to the end of 1891 was £45,837,717. During the same period the area of land disposed of by sales was 35,270,331 acres; the average rate per acre for lands of all kinds sold was, therefore, about £1 6s.

Number of selections.

From the returns of the Department of Lands it would appear that from 1862 to the close of 1891 the total number of individual selections applied for was 233,943, covering a total area of 31,185,521 acres, of which at the close of 1891 there were 161,017 still in existence, covering an area of 21,325,477 acres. Of the total number of selections applied for, 19,804, or 8·5 per cent., have become absolute freeholds, 141,213, or 60·3 per cent., are still in process of alienation, and 72,926, or 31·2 per cent., have been either declared void, forfeited, disallowed or withdrawn under the provisions of the various Land Acts. It is not possible to ascertain exactly the proportion which the actual number of distinct rural holdings bears to that of individual selections, but it is evident that the numerous portions taken up as additional conditional purchases greatly reduce the number of holdings, whilst the gradual absorption of a very large number of selections by the pastoral tenants of the Crown, principally in the central and western divisions of New South Wales, have greatly contributed towards the present state of the subdivision of the alienated lands.

Transference of selections.

A comparison of the area dealt with in the following table shows how fast the original conditional purchasers of Crown lands are dispossessing themselves of their holdings, whilst the area selected does not exhibit any tendency to increase at anything like the same rate. An examination of the table reveals the fact that in ten years only there have been 21,097,323 acres of conditional purchases transferred against 12,884,478 acres applied for, a difference of 8,212,845 acres, which have gone to increase the large estates, distinctly to the detriment of healthy settlement. Since the Act of 1889 came into force a slight revival of conditional purchases appears to have taken place, but there is no certainty of its continuance, as the best of the rural lands have long since been alienated, though there appears to be no great tendency among the country-born youth to follow city rather than country pursuits. Among the immigrants there is only a small proportion who are accustomed to country life, or who possess the means requisite for coping successfully with the difficulties which surround the pioneer, while the town-bred population show no disposition to embrace a rural life.

Year.	No. of selections.	Area selected.	No. of Transfers.	Area transferred.
		Acres.		Acres.
1882	14,607	2,392,220	8,665	2,134,319
1883	10,725	1,621,948	6,213	1,508,583
1884	10,657	1,453,937	6,017	1,525,456
1885	5,372	1,114,871	9,079	2,286,730
1886	6,061	954,560	7,154	1,861,877
1887	4,478	723,151	7,440	2,159,429
1888	5,364	862,716	10,469	3,096,051
1889	4,686	740,964	10,741	2,327,562
1890	8,526	1,713,577	13,492	1,863,508
1891	6,149	1,306,534	16,727	2,333,808
Total	76,625	12,884,478	95,997	21,097,323

Alienated.

Area unalienated.

The total area of land sold in fee-simple, and under system of deferred payments for which deeds were issued to the close of 1891, was 23,367,505 acres; the area granted for religious, scholastic, and other public purposes (including Church and School lands and private grants) was 3,123,094 acres; and the area in process of alienation under the system of deferred payment was 19,241,365 acres, making a total of 45,731,964 acres; there remained then a balance unalienated of 150,150,186 acres. This last figure includes an area of 9,094,977 acres under conditional lease. The area leased to pastoral tenants and others comprised 132,425,624 acres, which includes that leased to miners under the Mining Act, 289,627 acres, subdivided as follows:—

		Acres.
Area held under	Pastoral Leases at the close of 1891 ...	58,416,794
,,	Occupation Licenses at the close of 1891	49,638,749
,,	Conditional Leases ,,	11,234,131
,,	Homestead Leases ,,	8,665,035
,,	Annual Leases ,,	4,018,746
,,	Other Leases.............	162,542
,,	Leases under the Mining Act	289,627
	Total.. ...	132,425,624

so that out of the total available area of the Colony, viz., 195,882,150 acres, there were either leased or sold 178,157,588 acres, leaving a balance of only 17,724,562 acres, representing the area of country neither alienated nor leased, including reserves for public purposes and land unsuitable for settlement.

RURAL SETTLEMENT—HOLDINGS.

Holdings 1 acre and upwards.

Increase in area of holdings.

Excluding land held by the tenants of the Crown, there were, on the 31st March, 1892, 51,550 holdings of 1 acre and upwards in extent. Sixteen years previously such holdings numbered 39,639. The increase amounted to 30 per cent., while the area comprised in the holdings advanced from 18,210,796 to 42,081,694 acres, or 131 per cent. There has been a very marked tendency to increase the area of individual holdings during the past ten years, and this tendency is visible during nearly the whole period over which the records extend, as may be seen from the accompanying table. In 1887 and 1888 the average area declined considerably. This may be easily accounted for, as a result of the almost complete stoppage of the auction sales of Crown lands, which was one of the main features of the land policy inaugurated in 1861. The tendency to increase was again observable in 1889 and 1890, probably from an augmentation in the number of large selections or consolidated holdings in the central district of the Colony, consequent upon the extension of the maximum areas of land which may be taken up by individual selectors under the provisions of the Crown Lands Acts at present in force. The decrease observable in 1891 and 1892 is misleading when compared with the years immediately preceding, and is probably due to the action of the compulsory clauses of the Census Act under which particulars were obtained and have since been regularly supplied from a considerable number of small holders who, in previous years, failed to furnish any returns.

Year ended 31 March.	Average size of holding.	Year ended 31 March.	Average size of holding.
	Acres.		Acres.
1876	315	1885	813
1877	459	1886	862
1878	482	1887	817
1879	567	1888	809
1880	569	1889	853
1881	691	1890	862
1882	703	1891	824
1883	772	1892	816
1884	817		

Facilities afforded by Act of 1861.

The increase shown between the first and last years of the above series amounts to 501 acres, so that the average extent of holdings is now 159 per cent. larger than in 1876. This result is, in a certain measure, due to the facilities afforded to pastoral occupiers by the improvement clause of the Crown Lands Act of 1861, and its subsequent amendments, which permitted them to purchase at the rate of £1, and subsequently at £1 5s., per acre, in sections from 40 acres to 640 acres, areas which they had improved to the extent of £1 per acre. But it is attributable also, and in a large degree, to the vast areas of Crown lands then offered for sale at public auction, which almost invariably fell into the hands of the Crown tenants on whose runs they were situated. Up to the close of 1882, when a check was first given to this form of alienation, there had been disposed of by public auction 10,995,120 acres, whilst the area acquired under the improvement clauses amounted to 2,305,938 acres. At the date above mentioned, a total area of 35,478,346 acres had been alienated throughout New South Wales, of which 29,113,246 acres were sold subsequently to the Act of 1861, and of this area 13,301,058 acres, or a little more than 45 per cent., were parted with under the auction sale and improvement clauses, in the proportion of nearly five acres sold at auction to one bought under the improved purchase clauses.

Total alienation.

Number of holdings.

The total number of holdings over one acre in extent throughout the Colony in the year 1892 was 51,550, of which 29,386 were in the occupation of freeholders, and 9,426 were held by tenants; 3,231 occupiers held rented lands in addition to their freeholds, whilst to 9,507 holdings large areas of lands leased from the Crown were attached. The total area of these rural holdings was returned at 42,081,694, of which 37,388,068, or 88·9 per cent., were occupied by the proprietors of the soil, and 4,693,626, or 11·2 per cent., were held under rent. In the table below, these holdings are distributed into series of various areas:—

Size of Holdings.	Number of Holdings.					Area.		
	Free-holds.	Rented. (Private.)	Partly Freehold, partly Rented.	Freehold and Crown Lands.	Total.	Freehold.	Rented. (Private.)	Total.
Acres.	No.	No.	No.	No.	No.	Acres.	Acres.	Acres.
1 to 20	7,904	3,398	452	86	11,840	80,004	41,176	121,180
21 to 400	16,368	5,367	1,669	4,164	27,568	3,376,187	788,758	4,164,945
401 to 1,000	3,273	455	604	2,826	7,158	4,048,776	492,165	4,540,941
1,001 to 10,000	1,749	196	463	1,899	4,307	9,994,559	1,375,770	11,370,329
10,001 and upwards......	92	10	43	532	677	19,888,542	1,995,757	21,884,299
Totals, New South Wales	29,386	9,426	3,231	9,507	51,550	37,388,068	4,693,626	42,081,694

Comparative increase of holdings.

Comparing the number of existing rural holdings of various sizes, with those of the year 1879, it will be found that those under 16 acres have increased 85 per cent. ; those from 16 to 200 acres have scarcely advanced. Between 201 and 400 acres the number of holdings shows an increase of 19 per cent.; those from 401 to 1,000 acres increased 44 per cent. ; from 1,001 to 2,000 acres the increase was 98 per cent. ; from 2,001 to 10,000 acres it was 103 per cent. ; while in the largest class of holdings, from 10,001 acres upwards, the increase in number has been 107 per cent. during the thirteen years. The subjoined table shows the number of holdings in different classes at various terms of the period named :—

Acreage.	1879.	1881.	1886.	1891.
Under 16 acres	4,974	5,186	6,512	9,201
16 to 200..........................	21,302	20,361	21,288	22,815
201 to 400	6,199	5,753	6,382	7,392
401 to 1,000	4,964	4,959	6,792	7,158
1,001 to 2,000....................	1,212	1,470	1,948	2,402
2,001 to 10,000	940	1,176	1,458	1,905
10,001 and upwards	327	449	552	677
Total..................	39,918	39,354	44,932	51,550

Holdings in vicinity of towns.

The holdings under 16 acres in extent are, generally speaking, in the vicinity of towns, and consist mainly of gardens or orchards, and the increase of 85 per cent. is what would naturally be expected from the increased demand for their produce by a large population. The least satisfactory feature in the table is the fact that the number of holdings of moderate size do not greatly increase. In 1879 the total holdings having an area from 16 to 400 acres, amounted to 27,501, and in 1891 to only 30,207, showing an advance of only 10 per cent. On the other hand, the larger holdings have increased to a remarkable degree, so that, at the close of the year 1891 there were 12,142 holdings of 401 acres and upwards in extent, compared with 7,443 in 1879, or an increase of 63 per cent. in number in that short period. The area of holdings, as returned by occupiers, in each year since 1879, is given below :—

Year.	Under 200 acres.	From 200 to 1,000 acres.	From 1,000 to 10,000 acres.	Upwards of 10,000 acres.	Total Area of Holdings.
1879	1,890,293	4,950,938	5,692,576	10,187,796	22,721,603
1880	1,821,700	4,732,507	7,126,309	14,084,802	27,765,318
1881	1,816,674	4,811,634	6,990,311	14,073,589	27,692,208
1882	1,800,881	5,217,109	7,605,536	16,090,823	30,714,349
1883	1,811,483	5,586,273	8,131,955	17,823,287	33,352,998
1884	1,898,803	5,905,810	8,198,178	19,032,713	35,035,504
1885	1,903,360	6,018,570	8,340,872	21,346,794	37,609,596
1886	1,848,141	6,152,331	8,817,814	19,907,883	36,726,169
1887	1,984,940	6,181,374	9,480,412	19,170,765	36,817,491
1888	1,948,345	6,242,597	10,258,966	20,972,187	39,422,095
1889	2,105,555	6,352,325	10,417,449	22,167,300	41,042,629
1890	2,024,565	6,499,625	11,785,471	20,847,216	41,156,877
1891	2,095,857	6,731,209	11,370,329	21,884,299	42,081,694

Enclosed land

The area of unenclosed land in 1876 amounted to nearly two-fifths of the whole extent of the holdings ; but, in the beginning of 1891 the proportion had fallen to less than one-fifteenth, the area unenclosed at that period being only 2,922,179 acres out of a total of 42,081,694 acres occupied. This result is due partly to the operation of legislation, and partly to the saving of labour which fencing enables occupiers to effect.

Present state of settlement.

The foregoing remarks naturally lead to an examination of the statistics which indicate the present state of the settlement of the alienated land in New South Wales. For this purpose it will be necessary to extend this inquiry successively to the various parts of the Colony, and to follow, as much as possible, the order in which they were opened up, following the march of colonization, in each of the four zones of settlement into which the country may be said to be geographically divided, viz., the coast, the tableland, the western slope of the great dividing range, and the western plains. Each zone, having its own special character, offers to the settler different natural resources under different climatological conditions. Proceeding from the metropolis as a centre, settlement extended first along the coast, then to the central and more readily accessible parts of the tableland, following afterwards the course of the great inland rivers towards the southern and western parts of the Colony, thence to the great plains of the west, spreading slowly across the River Darling to the confines of the territory. Nature, assisted by legislation, contributed to shape settlement into its present form, the rational course of events, however, being at times interrupted by sudden rushes of population to points scattered over the surface of the country, even to its remotest extremities.

The electorates which are embraced within the area of the metropolis and its suburbs are necessarily outside the limits of this examination, as it is not intended to inquire into the present condition of urban settlement; but it may be stated, nevertheless, that as regards the subdivision and the distribution of landed property in the city and suburbs of Sydney there is now little difference between this and other much older communities. The figures given below refer only to rural settlement in the electorates immediately surrounding the metropolis, where the first attempts to colonize were made, extending but little beyond its suburban limits.

It will be seen from the following tables that there are in all these districts four distinct classes of holders of alienated land:—(1) Those who occupy their own freehold; (2) persons occupying holdings which they rent from the freeholders; (3) owners of land who rent from other private owners lands which they work in addition to their own freeholds; and (4) persons who, in addition to their freehold, rent from the Crown areas which are generally devoted to the depasturing of stock.

Metropolis and Environs.

	Occupiers of—						
	Freehold Land.	Rented Lands (Private).	Partly Freehold and partly Private Leases	Freehold and Crown Lands.	Area—Freehold.	Area Rented.	Total Area.
	No.	No.	No.	No.	Acres.	Acres.	Acres.
Metropolis	240	285	10	...	3,965	1,481	5,446
St. Leonards	402	96	11	...	16,067	1,442	17,509
Canterbury	836	342	31	...	11,574	7,854	19,428
Parramatta	26	24	2	...	184	95	279
Central Cumberland	1,992	309	95	...	84,532	42,503	127,035
Totals	3,496	1,056	149	...	116,322	53,375	169,697

Details of alienation.

Thus, in this part of New South Wales, an area of 169,697 acres is alienated in holdings over 1 acre in extent, representing 33·5 per cent. of the total area of these electorates, which is computed at 506,936 acres. Of these, 116,322 acres, or 68·5 per cent., are in the occupancy of the owners of the land, whilst 53,375 acres, or 31·5 per cent., are leased to tenant occupiers. There are 3,496 holders occupying their own freeholds, 1,056 tenants, 149 persons who both own and rent portions of their holdings, and 2 holders of Crown leases. It is in the electorate of Central Cumberland that the greater portion of leased lands is to be found, as out of a total alienation of 127,035 acres, 42,503 acres, or 33·5 per cent., are leased.

From the number of rural landholders in this district it is clearly seen that the average area held by each cannot be very large; in the electorate of Central Cumberland it reaches 53 acres per occupier, but it is only 5 acres in that of Parramatta, 10 in the rural portion of the Metropolitan electorates, 16 in Canterbury, and 34 in St. Leonards; the average for the whole division being only 36 acres per holding.

Progress of colonization.

Colonization, which commenced in the metropolitan centre, advanced thence towards the west, and the alluvial lands of the Hawkesbury and Nepean valleys were rapidly occupied and covered with prosperous farms. The progress of settlement was deflected to the northward by the high range of abrupt mountains in the west which was so long a barrier to its expansion in that direction. The lower portion of the valley of the river Hunter, abounding with natural resources, mineral as well as agricultural, soon attracted colonists, and at the present time more population is concentrated in this district than in any other part of New South Wales outside the metropolitan area. The following table indicates the actual state of rural settlement :—

East Central Division—Coast.

	Occupiers of				Total number of Occupiers of Rural Holdings.	Area—Freehold	Area—Rented.	Total area.
	Freehold Land.	Rented Lands (Private.)	Partly Freehold and partly Private Leases.	Freehold and Crown Lands.				
	No.	No.	No.	No.	No.	Acres.	Acres.	Acres.
Gloucester	298	141	74	45	558	257,108	261,991	519,099
Durham	252	260	63	95	670	214,789	83,420	298,209
Newcastle	12	14	5	..	31	3,403	2,651	6,054
Morpeth	114	293	28	..	435	28,609	18,740	47,349
Northumberland ..	185	92	19	1	297	46,504	20,715	67,219
Maitland, East	78	145	25	1	249	14,184	28,601	42,785
Maitland, West	49	24	9	..	82	568	573	1,141
The Hunter.........	309	262	58	4	633	89,772	54,854	144,626
Patrick's Plains....	331	210	63	50	654	353,975	98,687	452,662
Wollombi	669	131	77	15	892	130,929	36,939	167,868
Hawkesbury	703	228	96	15	1,042	87,101	25,076	112,177
Nepean............	627	187	62	1	877	70,790	39,121	109,911
Totals	3,627	1,987	579	227	6,420	1,297,732	671,368	1,969,100

Area alienated.

This Division contains a total area of 5,637,560 acres, of which 1,969,100 acres, or 34·9 per cent., are alienated among 6,420 landholders, so that the average area of holdings in this part of New South Wales is 307 acres. Of the area thus alienated 1,297,732 acres, or 65·9 per cent., are in the occupancy of the owners of the land; and 671,368 acres, or 34·1 per cent., are occupied by private tenants. In the farming electorates of East and West Maitland, the Hunter, and Morpeth, the proportion of land held by tenant occupiers is considerable, amounting to 66·4 per cent. of the total area alienated in both East and West Maitland, and to 37·9 and 39·6 per cent., respectively, of the area alienated in that of the Hunter and Morpeth. In the electorates of Durham, Gloucester, Northumberland, and Patrick's Plains the proportion of land occupied by the owners decreases from a maximum of 72 per cent. in Durham, to a minimum of 49·5 per cent. in Gloucester, of the total area alienated. That held by the tenant occupiers consequently increases from 28 to 50·5 per cent. The total number of occupiers is returned at 6,420 for the whole district; of these 3,627 occupy their own freeholds, 1,987 are tenants, 579 rent various areas in addition to their own land, and 227 hold, together with their freeholds, a certain area of Crown lands on lease. A considerable proportion of the holdings in this district occupy large areas, particularly in the rural electorates, the average area being 307 acres per holding, with a minimum of 14 acres in the urban district of West Maitland, and a maximum of 930 acres in that of Gloucester, in which a considerable portion of the original grant of 1,000,000 acres to the Australian Agricultural Company is situated. Patrick's Plains comes next with 692 acres per holding, the area being sensibly reduced in the other electorates, the Hawkesbury, the Nepean, and Morpeth, not exceeding an average area of 108, 125, and 109 acres per holding respectively.

Number of occupiers.

The South Coast.

In the earlier portion of the present century colonization took a southerly direction from the metropolis, and settlement extended rapidly along the lower valleys of the rivers of the South Coast, where the best of the lands were alienated in grants of large areas to a few families. The nature of the country and a more intelligent apprehension of true colonization resulted in the subdivision of these originally large estates into numerous and comparatively small holdings, which are at present cultivated by a fairly prosperous tenantry. This is especially the case in the electorates of Illawarra and Kiama, where the average area of holdings is

124 and 117 acres respectively. The average area of estates in the electorate of Eden, owing to its greater distance from the metropolis, and perhaps also to the mountainous character of a considerable portion of its area, reaches 409 acres, and in Shoalhaven the proportion is reduced to 210 acres; but in Camden where a number of the original grants are still held by the grantees or their descendants, an exceedingly small portion of their area being either cultivated or put to any use other than grazing a few head of stock, the average is increased to 241 acres per holding—that of the district, being only 248 acres. The land is principally devoted to agriculture, and especially to dairy farming; most of the occupiers following also pastoral pursuits.

South Coast Districts.

In the South Coast districts alienated rural lands are occupied in the manner illustrated in the following table:—

South Coast.

Electorates.	Occupiers of				Total.	Area—Freehold.	Area—Rented.	Total.
	Freehold Land.	Rented Land.	Partly Freehold and partly Rented Land.	Freehold and Crown Land.				
	No.	No.	No.	No.	No.	Acres.	Acres.	Acres.
Camden	1,016	520	183	47	1,766	283,061	143,588	426,649
Kiama	219	312	109	1	641	32,048	42,676	74,724
Illawarra	256	219	91	2	568	38,835	31,809	70,644
Shoalhaven	503	433	110	27	1,073	161,085	64,129	225,214
Eden	900	190	122	89	1,301	451,484	80,254	531,738
	2,894	1,674	615	166	5,349	966,513	362,456	1,328,969

Area alienated.

The area of alienated land is shown to cover 1,328,969 acres, or 26·2 per cent., of the total area, 5,077,120 acres, of this portion of New South Wales; the quantity of land occupied by the proprietors themselves being 966,513 acres, or 72·7 per cent., and that leased to tenant occupiers being 362,456 acres or 27·3 per cent. of the area alienated. In the Kiama electorate, out of a total of 74,724 acres alienated, 32,048 acres only, or 42·9 per cent., are occupied by the proprietors of the land; whilst 42,676 acres, or 57·1 per cent. are held by tenant occupiers. In that of Illawarra 38,835 acres, or 55 per cent., are occupied by the owners of the soil, and 31,809, or 45 per cent., by tenant farmers. In the district of Shoalhaven some 64,129 acres, or 28·5 per cent., of a total area alienated, amounting to 225,214 acres, are held under tenancy, and 161,085 acres are occupied by the owners of the land, whilst in the southern district of Eden only a small area, representing 15·1 per cent. of the total quantity alienated, is occupied by tenants. There are altogether in these electorates 2,894 occupiers of their own freeholds, 1,674 tenants, 615 landholders, occupying both leased and freehold lands, and 166 occupiers of Crown leases in addition to their freehold—a total of 5,349 occupiers, whose aggregate estate would cover 1,328,969 acres, or 248 acres per holding. Although settlement extended from Central Cumberland, the Hunter, and Illawarra inland towards the Central Tableland, the examination of its present state along the Northern Coast will here take precedence, in order that a clear insight into the development of the colonization of New South Wales in its four great natural divisions may be obtained.

North Coast Districts.

In the Northern Coast District the occupation of the country has extended rapidly of late years along the banks of the fine rivers which empty into the Pacific Ocean. Figures regarding this district will be found below :—

North Coast.

Electorates.	Occupiers of				Total.	Area—Freehold.	Area—Rented.	Total area alienated.
	Freehold Land.	Rented Land.	Partly Freehold and partly Rented Land.	Freehold and Crown Land.				
	No.	No.	No.	No.	No.	Acres.	Acres.	Acres.
Richmond	1,629	425	80	182	2,316	672,209	49,219	721,428
Clarence	503	254	43	20	820	90,211	19,368	109,579
Grafton............	500	253	62	108	923	253,438	32,068	285,506
Macleay	695	316	95	111	1,217	167,811	42,249	210,060
Hastings & Manning	992	361	78	130	1,561	258,760	73,112	331,872
Totals	4,319	1,609	358	551	6,837	1,442,429	216,016	1,658,445

Satisfactory Settlement.

Of all the districts of New South Wales the Northern Coast electorates exhibit the best and most satisfactory results as regards the settlement of the Crown lands. Nowhere else has the great object of the Act of 1861—to settle an industrious farming population on the soil—been better fulfilled. The total number of land-holders is 6,837, of whom only 1,609 are tenants, 4,319 occupying their own freeholds, whilst 358 work both their own land and additional areas rented from private owners, and 551 occupy areas of Crown lands together with their freeholds. The total area alienated in this rich part of the Colony amounts to 1,658,445 acres, or only 19·9 per cent. of the total extent of the district, which covers some 8,352,640 acres; and the average area of holdings is 243 acres, ranging from 133 acres in the Clarence to 311 in the Richmond. The proportion of leasehold lands to the area alienated is comparatively small, there being only 216,016 acres so held, or 13 per cent. of the total alienated area; whilst 1,442,429 acres are in the occupancy of the owners of the land themselves. In the districts of the Richmond and Grafton the area leased by private persons forms only 6·8 and 11·2 per cent. respectively of the area alienated; and the maximum is reached in the Macleay, where 20·1 per cent. of the settled rural lands is occupied by tenants.

From the above a pretty clear idea may be obtained of the present state of the rural settlement in the valleys of the coastal rivers, and in all that country which extends from the sea to the first slopes of the Great Dividing Range. Geographical features and climate are the main elements in determining the occupation of the soil, irrespective of administrative boundaries. In this part of New South Wales the settlement of the public lands has proceeded in a way very different to that of the tableland which extends from north to south, and divides the rich agricultural valleys of the coastal rivers and their broken mountainous watershed from the immense plains of the western district.

Slow progress of cultivation.

It would be erroneous to imagine, however, because the coastal region is better fitted for the purpose of the agriculturist, the dairyman and the fruit-grower, that the lands at present alienated are solely devoted to those industries; the agricultural development of New South Wales proceeds very gradually, and even in the districts referred to only a small proportion of the settled area is under cultivation.

Central Tableland.

After the difficulties raised by nature between the coast and the interior had been overcome, the pioneers of colonization penetrated to the central tableland, and thence extended to the south and the north, afterwards gradually overrunning the whole of the great western interior. At first they followed the course of the great rivers, and occupied, little by little, all the available land until, at the present time, only very inferior country remains untenanted.

The central tableland, comprising the electorates grouped around the cities of Bathurst and Orange, was the first settled, and the occupation of the alienated lands, at the present time, is illustrated by the figures given in the following table:—

Central Tableland.

Electorate.	Occupiers of				Total.	Area—Freehold.	Area—Rented.	Total.
	Freehold Land.	Rented Land.	Partly Freehold and partly Rented.	Freehold and Crown Land.				
	No.	No.	No.	No.	No.	Acres.	Acres.	Acres.
Hartley	431	80	34	163	708	156,754	24,196	180,950
Upper Hunter	650	86	57	422	1,215	1,437,381	72,627	1,510,008
Mudgee	707	205	80	295	1,287	441,183	81,594	522,777
Macquarie, East	352	160	77	184	773	191,039	82,393	273,432
Macquarie, West	183	247	29	39	498	111,528	62,037	173,565
Orange	391	146	42	40	619	187,794	51,933	239,727
Carcoar	601	105	76	340	1,122	661,260	104,186	765,446
Molong	532	109	42	195	878	531,550	48,308	579,858
Wellington	289	51	23	257	620	300,945	18,542	319,487
Totals	4,136	1,189	460	1,935	7,720	4,019,434	545,816	4,565,250

The number of holders of rural lands in this part of New South Wales is 7,720, of whom 4,136 occupy their own freeholds, 1,189 are private tenants, and 460 hold land both as free and lease holders, while 1,935 persons occupy areas of Crown lands, generally for grazing purposes, in addition to their own freeholds.

Area alienated.

The area alienated is 4,565,250 acres, representing 38·5 per cent. of the whole area of these districts, which is computed at 11,860,480 acres. The proportion of land occupied by the landowners themselves is 88·0 per cent., or 4,019,434 acres; whilst 545,816 acres are leased to tenant occupiers. In the agricultural electorates of East and West Macquarie the proportion of land leased is considerable, 144,430 acres out of 446,997 acres alienated in these electorates, or 32·3 per cent. are held by tenants; in that of Orange 51,933 acres, or 21·7 per cent. of that area alienated, are held in the same manner. The proportion gradually diminishes from 15·6 per cent. in Mudgee, to 5·8 per cent. in Wellington, and 4·8 per cent. in the Upper Hunter, where the country is less thickly settled, and is occupied principally for grazing purposes. In the latter electoral districts are situated some of the finest freehold estates of New South Wales, the land having remained in the hands of the original grantees or their descendants, who consolidated their holdings by taking advantage on a large scale of the auction sale and improvement clauses of the Land Act of 1861.

Size of holdings.

The average area of holdings in this division is 591 acres, ranging from a maximum of 1,242 acres in the Upper Hunter, owing to the cause just mentioned, to a minimum of 255 acres in Hartley, probably due to the number of selections of medium areas, taken up on the mountain heights along the Western line of railway. In Wellington, Molong, and Carcoar, where grazing occupies much larger areas than does the cultivation of the soil, the average rises to 515, 660, and 682 acres respectively. The holdings are used for agricultural purposes in a great many cases, but as grazing is generally combined with agriculture it would be a matter of difficulty to separate leaseholders into the two distinct classes of agriculturists and of graziers.

Southern table-land.

The conditions of settlement in the southern table-land do not greatly differ from those which obtain in the central districts, the principal feature being the greater proportion of holdings occupied by their proprietors—a class of small graziers who devote little attention to agriculture, and who in the majority of instances, have not yet complied entirely with the conditions necessary before they can become possessed of their holdings from the Crown. The following table illustrates the state of settlement in the various electorates which comprise this portion of the Colony :—

Southern Table-land.

Electorate.	Occupiers of					Area—Freehold.	Area—Rented.	Total.
	Freehold Land.	Rented Lands (Private).	Partly Freehold and partly Private Leases.	Freehold and Crown Lands.	Total.			
	No.	No.	No.	No.	No.	Acres.	Acres.	Acres.
Argyle	723	158	150	221	1,252	664,600	167,233	831,833
Goulburn..........	57	26	4	....	87	2,390	701	3,091
Braidwood	332	98	51	87	568	217,360	45,395	262,755
Queanbeyan	318	78	53	180	629	513,572	64,128	577,700
Monaro	563	87	66	393	1,109	1,227,632	41,954	1,269,586
Yass Plains.......	455	85	62	258	860	691,785	64,831	756,616
Boorowa	234	28	20	249	531	431,885	27,560	459,445
Young	720	87	43	182	1,032	900,851	44,101	944,952
Gundagai..........	411	94	58	87	650	713,262	48,427	761,789
Tumut	424	180	31	100	735	298,670	26,135	324,805
Totals ..	4,237	921	538	1,757	7,453	5,662,107	530,465	6,192,572

Area alienated.

Thus the land alienated in this part of New South Wales comprises 6,192,572 acres, or 45·9 per cent. of the whole of its area, which contains over 13,491,200 acres. Of these only 530,465 acres, or 8·6 per cent. of the settled lands, are held in tenancy, whilst 5,662,107 acres, or 91·4 per cent., are occupied by the land-owners themselves. Tenant holdings are more numerous, and cover a greater area, in the agricultural electorates than in those where grazing farms are the rule, and cultivation the exception. In Goulburn, Argyle, Braidwood, and Tumut the proportion of alienated holdings occupied by tenants ranges from 22·7 down to 8·0 per cent.; whilst in the more southern electorate of Monaro this proportion is reduced to 3·3 per cent. In the whole of this group of electorates the total number of occupiers is 7,453, of whom 4,237 occupy their own freeholds, 921 are tenants, 538 occupy both descriptions of alienated lands, while 1,757 occupy areas of Crown lands in addition to their freeholds. The conditions of settlement, in which pastoral occupation is the leading feature, must necessarily affect greatly the average extent of rural holdings, and in this division, it will be found, to attain fairly high proportions, 831 acres being the average throughout, with a maximum of 1,172 acres in Gundagai, and a minimum of 35 acres in the urban electorate of Goulburn. In the districts of Yass Plains, Young, Boorowa, and Queanbeyan, the average varies only between 865 and 918 acres; whilst in the electorates of Braidwood and Tumut it is reduced to 462 and 442 acres respectively.

Northern tableland.

In the northern tableland the disproportion between freeholders and tenants is very strongly marked, the latter forming a a very small minority of the occupiers of alienated lands, owing to the same causes which operate both in the south and in the centre of this great section of New South Wales. It is evident that the object of the Land Act of 1861 to create a class of independent settlers has been fairly successful, notwithstanding the fact that the number of actual occupiers is small compared to that of the individual selectors who since the year 1861 have applied for conditional purchases. The following figures illustrate the state of settlement in the part of the country in question :—

Northern Table-land.

Electorate.	Occupiers of					Area—Freehold.	Area—Rented.	Total.
	Freehold Land.	Rented Land.	Partly Freehold and partly Rented Land.	Freehold and Crown Land.	Total.			
	No.	No.	No.	No.	No.	Acres.	Acres.	Acres.
Inverell	353	65	27	98	543	388,360	22,687	411,047
New England	605	39	27	488	1,159	1,168,902	68,140	1,237,042
Glen Innes	315	30	23	136	504	307,369	10,401	317,770
Tenterfield	350	40	20	79	489	151,288	6,079	157,367
Tamworth	446	66	60	273	845	931,959	42,510	974,469
Totals......	2,069	240	157	1,074	3,540	2,947,878	149,817	3,097,695

Area alienated.

The total area alienated in these electorates is 3,097,695 acres, or 23·2 per cent. of its whole extent of 13,333,120 acres. The total number of occupiers of rural settled lands is 3,540, of whom 2,069 live on their freeholds; whilst only 240 are tenants, 157 holding both freehold and leasehold land, and 1,074 occupying Crown lands in addition to their freeholds. The proportion of the area occupied by private tenants is 149,817 acres, or 4·8 per cent. of the whole extent of alienated land; whilst 95·2 per cent., representing 2,947,878 acres, is occupied by the landowners themselves. The land is used for both agricultural and pastoral purposes, and these industries are generally carried on conjointly. The average area of holdings in this district varies between 322 acres per holding in Tenterfield and 1,153 and 1,067 acres in those of Tamworth and New England, where large freehold estates are situated; in Glen Innes the average reached 630 acres, and in Inverell 757 acres, the general average of the district being 875 acres.

The districts situated on the western slopes of the Great Dividing Range mark the transition between the agricultural settlements of the coast and tableland, and the purely pastoral settlements of the great west; the extent of arable land is very considerable, but little is devoted to cultivation, as it is more economical, at present, to use the land for grazing purposes, the great distance to the markets being the principal obstacle to a rapid expansion of agriculture on the tableland.

Decrease of alienation in the west.

It will be noticed that the proportion of land alienated considerably diminishes as these districts are reached, except in those parts where the excellence of the land for grazing purposes, and even for agriculture, impelled the pastoral tenants of the Crown some years ago to secure their holdings from the incursions of the free selector, whom the Act ostensibly intended to favour, by means of systematic alienations under the auction sale and improvement clauses of the Land Act of 1861. In the south-western districts, which are traversed by the principal permanent rivers of western New South Wales, the land has been alienated wholesale, and immense areas of freehold land are in the hands of a very small number of landholders; while in the north-western districts the freehold estates are neither so numerous nor of so enormous an extent as those of the south. The state of settlement in the electorates situated in the southern part of the western slope of the Great Dividing Range may be gathered from the following figures:—

South-Western Slopes.

Electorates.	Occupiers of					Area—Freehold.	Area—Rented.	Total.
	Freehold Land.	Rented Land.	Partly Freehold and partly Rented Land.	Freehold and Crown Land.	Total.			
	No.	No.	No.	No.	No.	Acres.	Acres.	Acres.
Hume............	598	82	45	131	856	1,793,880	83,265	1,877,145
Albury	262	34	23	1	320	167,815	12,719	180,534
Murray	404	55	57	81	597	3,252,867	104,701	3,357,568
Murrumbidgee	991	187	103	443	1,724	4,915,728	187,544	5,103,272
Totals......	2,255	358	228	656	3,497	10,130,290	388,229	10,518,519

Riverina district.

The total area of this district, commonly called Riverina, is computed at 18,438,518 acres, of which 10,518,519 acres are now alienated, or 57 per cent. of the whole area. In some of the electorates, however, a great portion of the land has been parted with; thus, in the Murray, 70·6 per cent., or 3,357,568 acres, are alienated, out of a total of 4,753,920 acres; whilst in Albury little land is left excepting reserves. In the electorate of Hume 1,877,145 acres, or 60·4 per cent. of the area of the district, viz., 3,109,200 acres, are alienated; whilst in that of the Murrumbidgee, which is one of the most extensive electorates in New South Wales, containing 10,392,438 acres, 49·1 per cent. of the area has been alienated by 1,724 occupiers. Only a small proportion of the land in this district is held by tenants, the total area so occupied being only 388,229 acres, out of a total of 10,518,519 acres alienated, the remaining 10,130,290 acres being in the occupation of the proprietors themselves.

Grazing in Riverina.

The land is used principally for grazing purposes throughout Riverina, although cultivation is extending with great rapidity in the parts of the districts which have easy access to railway or river carriage. As may be presumed, the average area of holdings must be high in districts where the operations of the auction and improvement clauses of the Crown Lands Act of 1861 were extensively applied for the purpose of consolidating holdings and preventing the land from falling into the hands of the free selectors, whom the great pastoral lessees did not look upon as desirable neighbours. Such was the case in these localities, the land having been bought up wholesale, the pastoralists being greatly helped by the various banking corporations, their joint operations resulting in the alienation of immense areas of the best pastoral land the Colony possesses. Notwithstanding, however, the hostility of the Crown lessees, numerous selections were made, upon which agriculture is now spreading, whilst, with but a few exceptions, the huge pastoral estates of Riverina are entirely given up to the rearing of stock, sheep-breeding being practically their only industry. The average area of holdings for the whole district is 3,007 acres, but in the electorate of the Murray it reaches 5,624 acres; in the Murrumbidgee the average is 2,960 acres per holding, and in the Hume 2,193 acres; whilst in that of Albury, where the selections were comparatively more numerous, it is only 564 acres, exhibiting thus a healthier state of settlement.

Average area.

The electorates situated in the Central portion of the Colony on the western slope of the dividing range exhibit somewhat similar results, although the alienation of Crown Lands was not carried on to the same extent as was the case in the south, as an examination of the following table will show :—

Central Western Slopes.

Electorate.	Occupiers of Freehold Land.	Occupiers of Rented Land.	Occupiers of Partly Freehold and partly Rented.	Occupiers of Freehold and Crown Land.	Total.	Area—Freehold.	Area—Rented.	Total.
	No.	No.	No.	No.	No.	Acres.	Acres.	Acres.
Bogan	399	125	39	849	1,412	1,961,299	331,723	2,293,022
Forbes	327	29	30	468	854	654,043	37,788	691,831
Grenfell	380	28	15	446	869	1,170,837	43,368	1,214,205
Totals	1,106	182	84	1,763	3,135	3,786,179	412,879	4,199,058

Central Western Slopes.

The total area alienated amounts to 4,199,058 acres, or 21·6 per cent. of the total area of the district, which is estimated at 19,434,660 acres. The greatest area alienated is in the electorate of the Bogan, where there are 2,293,022 acres held by settlers. This is, however, but 24·5 per cent. of the total area of this large district, which contains 9,345,700 acres, whilst in Grenfell 1,214,205 acres, or 33·6 per cent. of the whole area of 3,616,640 acres have been parted with by the State. In Forbes only 10·7 per cent. of the area of the electorate is yet alienated, representing 691,831 acres out of a total of 6,472,320 acres. The land is almost entirely devoted to pastoral pursuits; nevertheless in the eastern portion of this district, and in the vicinity of the towns of Dubbo, Forbes, and Grenfell, agriculture is rapidly spreading. Although the area held by tenants is proportionately larger than is the case further south, there are only 412,879 acres so held, the proprietors still occupying 3,786,179 acres out of the 4,199,058 acres of alienated land the district contains.

Average area.

As a result of the small number of settlers in so extensive a district, the average area of holdings is necessarily fairly large, although it does not attain to such proportion as in the south, the average of this division being 1,339 acres, with a maximum of 1,624 acres in the Bogan, a minimum of 810 acres in Forbes, and an area of 1,397 acres per holding in Grenfell.

In the northern portion of the western slope of the Dividing Range, the distribution of settlement closely resembles that met with in the division just examined, as the following table shows :—

North Western Slopes.

Electorate.	Occupiers of				Total.	Area—Freehold.	Area—Rented.	Total.
	Freehold Land.	Rented Land.	Partly Freehold and partly Rented.	Freehold and Crown Land.				
	No.	No.	No.	No.	No.	Acres.	Acres.	Acres.
Gunnedah	254	23	13	161	451	1,523,755	19,559	1,543,314
Gwydir	200	40	23	333	596	1,290,905	375,060	1,665,965
Namoi	214	48	13	359	634	1,103,266	82,246	1,185,512
Totals	668	111	49	853	1,681	3,917,926	476,865	4,394,791

Area alienated.

The area alienated is 4,394,791 acres, or 26 per cent. of the total area which is 16,890,384 acres, the highest proportion of alienated land being in Gunnedah where 1,543,314 acres or 58·8 per cent. of the total area of electorate, calculated at 2,626,560 acres, have become alienated, the greater portion by the pastoralists, who have succeeded in preventing the settlement of an agricultural class over the best portion of the famed Liverpool Plains. There are also 1,665,965 acres alienated in the Gwydir out of 7,253,120 acres, or 23 per cent. of this total, whilst in the extensive district of the Namoi, out of 7,010,704 acres, 1,185,512 acres, or 16·9 per cent. only, are as yet alienated. The competition between pastoralists and selectors was not so keen in the north-western districts as it was in the central, and more particularly in the south-western division, presumably because the land, though equally good in quality, was too distant from the markets, besides, the country becomes more exposed to extreme climatic influences in the northern parts. The average area of holdings throughout the district, though higher than in the central western district, is not so large as in those of the south-west; it reaches 2,614 acres, with a maximum of 3,421 acres in Gunnedah, owing to causes explained above, and a minimum of 1,870 in the Namoi, the Gwydir having an average

Average area.

of 2,795 acres per holding. These districts, with the exception of their eastern portion, abutting on the boundary of the tableland of New England, are entirely devoted to the depasturing of stock. Tenant occupiers are not numerous, only 111 being returned as renting some 476,865 acres of land, principally for grazing purposes, the remaining 3,917,926 acres, out of a total of 4,394,791 acres alienated, being still occupied by the proprietors themselves.

Settlement in the west.

In the extreme west of the Colony settlement is making but slow progress. With the exception of the great mining centre of Broken Hill, situated on the boundary of the neighbouring colony of South Australia, around which a large population has settled within the last few years, the whole of this vast portion of the domain of New South Wales is given up to the depasturing of stock. Sheep-breeding is practically the only industry, the general character of the country militating against the successful rearing of cattle. The present state of settlement is illustrated by the figures given below :—

Western Plains.

Electorates.	Occupiers of—				Total.	Area—Freehold.	Area—Rented.	Total Area Alienated.
	Freehold Land.	Rented Land.	Partly Freehold and partly Rented Land.	Freehold and Crown Land.				
	No.	No.	No.	No.	No.	Acres.	Acres.	Acres.
Balranald	124	25	9	270	428	2,341,532	183,392	2,524,924
Wentworth ..	84	12	4	44	144	208,541	36,605	245,146
Wilcannia	32	4	....	22	58	39,935	181	40,116
Bourke	106	40	....	167	322	490,978	664,938	1,155,916
Sturt	233	9	1	22	265	20,272	1,224	21,496
Totals....	579	90	14	525	1,217	3,101,258	886,340	3,987,598

Area alienated.

The proportion of land alienated is only 4·6 per cent. of the total area of this district, being an aggregate of 3,987,598 acres out of 85,824,598 acres, which it is estimated to contain. Of this area

3,101,258 acres are in the occupancy of the landowners, only 886,340 acres being held under lease, this kind of tenure being principally met with in the electorate of Bourke, where 57·5 per cent. of the total area alienated appears to be so held, probably from the fact that some large pastoral estates containing a considerable area of alienated lands are held under lease from the original Crown lessees. The total number of holdings is 1,217, of which 579 are freeholds, 99 rented properties, 14 partly freehold and partly leasehold, and 525 freeholds to which considerable areas of Crown lands are attached. Owing to this small number of estates, the average area alienated is very large—viz., 3,277 acres for the whole division, closely approaching in some electorates the average noted in the Riverina district; similar causes having produced like effects in the electorate of Balranald, for example, where the average attains 5,899 acres per holding; in Bourke the average reaches 3,589 acres, and in Wentworth 1,702 acres; but in Sturt the number of small holdings around the silver mines of the Barrier reduces the average to only 81 acres per holding; whilst in Wilcannia the alienated holdings are few in number, and average 691 acres. The land is used purely for pastoral purposes, except in the vicinity of townships, where market-gardening and fruit-growing is carried on, principally by Chinese.

Average area.

Aggregation of holdings.

It will be seen from an analysis of the figures that settlement in New South Wales has hitherto tended towards the concentration into comparatively few hands of the lands alienated to a large number of individual selectors, and that in the great majority of cases the owner of the land is also the occupier. Tenancy, as understood in older settled communities, has made comparatively little progress, 88·9 per cent. of the land alienated being yet in the occupancy of the proprietors themselves, over an area of 37,388,068 acres, whilst only 4,693,626 acres, or 11·2 per cent., is held under lease from the freeholders.

Size of holdings.

The following table shows the subdivision of the alienated estate of New South Wales, according to size of holdings and the relation that the area held under private lease bears to the total alienated in each category :—

Subdivision of Alienated Lands.

Size of Holdings.	Occupiers of				Total Number of Holdings.	Area—Freehold.	Area—Rented.	Total.	Percentage of Land in the various sizes of Holdings	Percentage to Total Area of the Colony Alienated.	
	Freehold Land.	Rented Land.	Partly Freehold and Rented Lands.	Freehold and Crown Lands.						Freehold.	Rented.
						acres.	acres.	acres.	per cent.	per cent.	per cent.
1 to 30 acres..	7,904	3,398	452	86	11,840	80,004	41,176	121,180	0·29	0·19	0·10
31 to 400 ,,	16,368	5,367	1,669	4,164	27,568	3,376,187	788,758	4,164,945	9·89	8·02	1·87
401 to 1,000 ,,	3,273	455	604	2,826	7,158	4,048,776	492,165	4,540,941	10·79	9·62	1·17
1,001 to 10,000 ,,	1,749	196	463	1,899	4,307	9,994,559	1,375,770	11,370,329	27·03	23·76	3·27
Upwards of 10,000....	92	10	43	532	677	19,888,542	1,995,757	21,884,299	52·00	47·26	4·74
Totals	29,386	9,426	3,231	9,507	51,550	37,388,068	4,693,626	42,081,694	100·00	88·85	11·15

Present condition of settlement.

The above figures strikingly illustrate the present condition of colonization in New South Wales, and their meaning should not be lost on those who watch with attention and interest the phases of settlement in this country. The percentage of land in holdings less than 30 acres in area is only 0·3 per cent. of the total area of land alienated in the Colony, and represents an aggregate of 121,180 acres out of a total of 42,081,694 acres; this small acreage is held by 11,840 persons, each occupying an average of 10¼ acres. Holdings between 31 and 400 acres in extent number 27,568 with an aggregate area of 4,164,945 acres or 9·9 per cent. of the area alienated in the Colony, and an average therefore of 151 acres per holding. It is in this category that a great portion of the land devoted to cultivation is to be found. In areas between 401 and 1,000 acres are to be found 7,158 estates, the numbers decreasing rapidly as the areas increase, aggregating in all 4,540,941 acres or 10·8 per cent. of the area alienated, giving each an average of 634⅓ acres. The tendency just noted becomes still more marked in the holdings between 1,001 and 10,000 acres in extent, their number being only 4,307, whilst they aggregate 11,370,329 acres or 27 per cent. of the total area alienated in the State, an average of 2,640 acres per holding. The climax is reached however in the holdings of more than 10,000 acres in extent; of these there are but 677 aggregating 21,884,299 acres or 52 per cent. of the whole area alienated from the Crown, each averaging an area of 32,325 acres.

Reference has already been made to the fact that land sold in large areas at auction are, for the most part, secured by holders who already own large estates, as well as to the circumstance that lands conditionally purchased are being transferred to the same class of persons at a more rapid rate than other lands are being selected for *bona fide* occupation. Little further need be said, therefore, in order to show that the practice of holding land in large areas is more likely to be intensified than diminished during the next few years.

Settlement and cultivation compared.

Some remarks as to the relative state of agriculture and settlement on the alienated rural lands of New South Wales could not fail to be of interest, especially when read with the preceding figures. The following table deals with this question and the figures carry with them their own explanation :—

Size of Holding.	Number	Aggregate area alienated in each series.	Proportion to total area of Colony.	Area cultivated in each series.	Proportion cultivated to aggregate area alienated.
1 to 30 acres	11,840	121,180	0·3	38,353	31·7
31 to 400 acres	27,568	4,164,945	9·9	416,464	10·0
401 to 1,000 acres	7,158	4,540,941	10·8	188,494	4·2
1,001 to 10,000 acres	4,307	11,370,329	27·0	167,797	1·5
Upwards of 10,000 acres ...	677	21,884,299	52·0	29,788	0·1
Total and Proportions...	51,550	42,081,694	100·0	840,896	2·0

Although the highest proportion of land cultivated in any of these series when compared with the total area alienated in the Colony is found in holdings from 31 to 400 acres, yet when compared with the aggregate area alienated in the series itself it represents only 10 per cent. of it, whilst on the smaller holdings less than 31 acres in extent, as much as 31·7 per cent. of the area alienated is under cultivation. The proportion considerably decreases as the higher areas are reached, being reduced to 0·1 per cent. in those over 10,000 acres.

From the above table some interesting information may be gleaned with regard to the proportion of the number of owners of land who still occupy their freeholds, those who reside on rented lands, and those who occupy, in addition to their freeholds, lands rented either from private owners or from the Crown ; but a better and more comprehensive view of these two phases of settlement will be obtained by an examination of the following table, in which the holdings are divided into a greater number of categories according to their respective size :—

Size of Holdings.	Occupiers of—				Total Number of Occupiers.
	Freehold Land.	Rented Land (Private.)	Partly Freehold and partly Rented Land.	Freehold and Crown Land.	
acres.					
1 to 5	4,195	1,389	147	39	5,770
6 ,, 15	2,264	973	167	27	3,431
16 ,, 30	1,445	1,036	138	20	2,639
31 ,, 50	3,189	1,446	194	408	5,237
51 ,, 100	4,125	1,821	373	800	7,119
101 ,, 200	4,965	1,276	512	1,067	7,820
201 ,, 300	2,322	512	356	832	4,022
301 ,, 400	1,767	312	234	1,057	3,370
401 ,, 500	943	141	176	447	1,707
501 ,, 600	619	82	122	349	1,172
601 ,, 700	900	110	93	1,492	2,595
701 ,, 800	347	47	85	196	675
801 ,, 900	221	26	67	158	472
901 ,, 1,000	243	49	61	184	537
1,001 ,, 1,500	699	86	168	607	1,560
1,501 ,, 2,000	365	41	73	363	842
2,001 ,, 3,000	347	28	92	317	784
3,001 ,, 4,000	139	12	52	192	395
4,001 ,, 5,000	76	11	26	114	227
5,001 ,, 7,500	74	11	32	194	311
7,501 ,, 10,000	49	7	20	112	188
10,001 ,, 15,000	38	5	19	157	219
15,001 ,, 20,000	17	3	9	93	122
20,001 ,, 30,000	14	1	7	110	132
30,001 ,, 40,000	7	......	3	47	57
40,001 and upwards...	16	1	5	125	147
General Total	29,386	9,426	3,231	9,507	51,550

From the above it will be seen that the total number of occupiers of freeholds only is 29,386, the proportion to the total number of occupiers being fairly constant in each description of holdings. Absolute tenants to the number of 9,426 are far more numerous in the smaller classes of holdings, and rapidly diminish both in number and proportion as the estates become larger. The same is the case with regard to holders of freehold and rented land, whose number is only 3,231, whilst the reverse obtains in holdings to which Crown lands are attached, their number and proportion increasing with the size of holdings. There are 9,507 such estates the majority of holdings over 1,000 acres in extent being found in that category.

Purposes land used for.

As regards the various purposes for which land is used, it must be understood that no hard and fast rule c[illegible] drawn between those holdings which are returned as [illegible] used for agricultural purposes and those devoted to [illegible]g, as both these occupations are carried on conjointly, [illegible] in the extreme west of the Colony, where hardly any cro[illegible] are grown. Agriculture is carried on to a greater extent on estates below 300 acres in area than in those of larger size, the proportional number of holdings principally occupied for agricultural purposes being greater as the respective areas become smaller. Beyond an area of 500 acres the land becomes more and more used for purely pastoral purposes, the proportion of cultivated estates decreasing as the areas increase; until among those of large areas but few are found upon which any kind of crops are grown.

PART XI.

Agricultural Production.

Soils adapted for the produce of many climes.

THERE is found in [illegible] South Wales so great a variety of soils and climate that almost any kind of crop, whether specially the produce of temperate and even cold climates, or of sub-tropical regions may be grown. The nature of the soil varies greatly in different parts of the country; but, except in the inaccessible or rugged portions of the mountain chains, and the more arid regions of the north-western districts, the soil is almost everywhere susceptible of cultivation. The area absolutely unfit for occupation of any sort has been roughly estimated at less than 5,000,000 acres; it may therefore be said that the greater part of the area adapted for settlement is also in some form or another capable of being cultivated. Success in agricultural operations in New South Wales is, however, altogether independent of the mere fitness of the soil for cultivation. So far, experience has shown that an irregular rainfall and a want of uniformity in the seasons, which are the chief characteristics of the climate of a large part of the interior, are the greatest drawbacks to the advance of agriculture.

Rich soil of coastal valleys.

Owing to the confined nature of their basins the portion of the valleys of the coastal rivers adapted for agriculture is limited, but nowhere could there be found richer soil than along the lower reaches of these rivers. The brush lands of the Tweed, Richmond, Clarence, Macleay, and Manning are proverbial for the richness of their soil, and the sandy alluvial formations of the Hunter and the Hawkesbury valleys have been cultivated for nearly a hundred years without rest, being enriched periodically by fluvial inundations. The valleys of the southern rivers of the coast district are not less rich, and along the banks of the Shoalhaven, Clyde, Tuross, and other streams are found unmistakable evidence of thriving industry.

Variety of climate.

The variety of climate experienced in a region extending through 8 degrees of latitude, from 29 degrees to 37 degrees south, causes a corresponding variety in the kinds of produce which may be successfully grown.

Principal crops grown in the coast districts.

Maize is grown in almost every part of the coastal region, along the river valleys, especially north of Sydney, and yields an abundant return. Sugar-cane is cultivated only on the northern rivers, very little being raised southward of the Clarence. Wheat is grown in the Hunter valley to some extent, but not in the country further north. In the southern district, although the little wheat raised shows a comparatively high return, the extent of land cropped is too small to enable a reliable inference to be drawn as to the true capabilities of this rich district. The climate of the northern coast is particularly favourable to the growth of semi-tropical products, especially sugar-cane, coffee, and tobacco; and in the Hunter valley the vine finds a natural home.

Soil suitable for fruit-trees.

The soil of the coastal region is almost everywhere suitable to the growth of fruit-trees, both semi-tropical and European. Oranges, lemons, shaddocks, and other varieties of the citrus class, thrive well on all parts of the north coast, and nowhere better than on the hills surrounding Parramatta, and in the valleys of the Hawkesbury, Nepean, and Parramatta Rivers.

Suitability of tableland for European cereals.

On the high plateau of the Great Dividing Range a variety of soil is met with, and there is much rich agricultural country, especially suited for the cultivation of wheat, barley, oats, and other products of cold and temperate regions. Notwithstanding the drawbacks in the shape of uncertain seasons and variable rainfall, the results obtained in the cultivation of cereal crops in the rich soils of the Monaro, Tumut, Bathurst, Wellington, Mudgee, and New England districts, on the mountain plateaux, are certainly encouraging.

Alluvial deposits.

In the western division the alluvial deposits, extending along the course of the great rivers which carry the drainage of the larger portion of New South Wales to the waters of the Murray, have formed a soil of excellent quality, and the cereals which form the more considerable items in the sustenance of mankind might be grown in immense quantities were the rainfall more abundant and regular. Attempts have been made on small patches of country here and there to test the agricultural qualities of the soil, with the result that in years of abundant and regular rains the crops have been magnificent, but in times of drought the returns have been as scanty as in favourable seasons they have been plentiful. Notwithstanding this drawback, the cultivation of cereals in the Murray and Murrumbidgee valleys is greatly on the increase, and in no other part of New South Wales can there be noticed a greater advance in agricultural settlement, except perhaps in the Richmond and Clarence district, bordering the north coast of the Colony. It may be confidently asserted with regard to Riverina, that wherever it may become practicable to conserve water, or to establish an intelligent system of irrigation, the soil will repay with a bountiful harvest the labours of the agriculturist. Over what area systematic irrigation may be carried on has not yet been ascertained, though possibly this may not prove to be very considerable, owing to the comparatively small volume of the rivers whence the water must be obtained, and the irregularity of their flow. The physical formation of New South Wales has been described elsewhere. It will have been noticed that it differs greatly from any other country where artificial irrigation has been practised on a large scale, and that the absence of mountain ranges capped with perpetual snow, forming natural and inexhaustible reservoirs, is a marked peculiarity of the country.

Practicability of irrigation.

CULTIVATION.

Area under cultivation.

The area of New South Wales under cultivation during 1891 amounted to 1,179,621 acres. This, however, includes 333,238 acres of artificially sown grasses, so that the area under crop, properly so called, was 846,383 acres:—

Year ended 31st March.	Total number of acres in cultivation, including grass lands.	Per inhabitant.
	Acres.	Acres.
1877	513,840	0·8
1878	546,556	0·9
1879	613,642	0·9
1880	635,641	0·9
1881	710,337	0·9
1882	645,068	0·8
1883	733,582	0·9
1884	789,082	0·9
1885	852,017	0·9
1886	868,093	0·9
1887	975,471	1·0
1888	1,048,305	1·0
1889	999,298	1·0
1890	1,164,475	1·1
1891	1,241,419	1·1
1892	1,179,621	1·0

Extent of agricultural cultivation.

Only 0·4 per cent. of the total area of New South Wales is actually devoted to the growth of agricultural produce, and if the small extent of land upon which permanent artificial grasses have been sown for dairy farming purposes be added to the area under crops, this proportion only reaches 0·6 per cent. of the total area of New South Wales, and does not represent much more than 1 acre per head of its population.

An impression appears to prevail that in this country purchased lands are used by the settlers for agricultural purposes, whilst Crown leases only are used for grazing, but such is far from being the case, as the very great majority of selectors are only graziers in a small way of business, and agricultural settlements, pure and simple, are confined to very limited areas in the alluvial lands of the lower valleys of the coastal rivers and around two or three centres in the middle division of the table-land. Computed on the area of alienated rural lands, the proportion of area cultivated throughout New South Wales is only 2 per cent.

Proportion of cultivated to alienated land.

The area of land cultivated by the land-owners themselves is 652,738 acres, or 77·1 per cent. of the total area under crops, there being only 193,645 acres or 22·9 per cent. cultivated by tenant occupiers, including Crown land lessees. If the area under permanent grasses be added, the proportion of cultivated leased lands would be somewhat higher, as a considerable portion of the dairy farms in the southern coast are held on lease from the original proprietors.

The Census Act of 1891 enabled the Department to obtain very varied information, including, among other items, the area allowed to lie fallow and that prepared for future agricultural operations by clearing and grubbing, in addition to the actual cultivation, and the figures analysed in last year's issue show the whole extent of land used and intended for agricultural and dairy pursuits. This year the area actually under crop and artificial grasses only is referred to, hence different results are shown, which, compared with the Census year's information, might be misunderstood without this explanation.

Electorates adjacent to the Metropolis.

In the electorates immediately adjacent to the metropolis, comprising, besides the city electorates, those of St. Leonards, Canterbury, Parramatta, and Central Cumberland, the total area cultivated amounts to 21,121 acres or 12·5 per cent. of the area of rural lands alienated, which covers 169,697 acres. The greater part of this area is devoted to the cultivation of a variety of orchard produce, the orange, lemon, and various kinds of other fruit being grown in great quantities, whilst market-gardens cover a fairly extensive area in the immediate vicinity of the metropolis. Including 13,376 acres laid down in permanent artificial grasses, the total area under cultivation covers 34,497 acres in this district. The total number of persons employed in agricultural operations was stated at 5,321, of whom 5,003 were males and 318 were females assisting in farm work; in the dairies 199 persons were employed, 157 males and 42 females; the total number of persons engaged in rural occupations was therefore stated at 5,520.

Central Coast Division.

In the whole of the Central Coast Division, embracing the electorates of Morpeth, East and West Maitland, the Hunter, the Wollombi, the Hawkesbury, the Nepean, Patrick's Plains, Durham, Gloucester, Northumberland, and Newcastle, the total area under crop is 72,826 acres, or 3·7 per cent. of the alienated rural lands. The proportion of land cultivated by tenant occupiers amount to 30,858 acres, or 42·4 of the total area under crop in the whole district, but in the districts of East Maitland, Morpeth, and West Maitland, the proportion of land cultivated by tenants is much higher—between 70 and 59 per cent. of the whole area cultivated. In the electorates of Durham, Patrick's Plains, and Hunter the proportion decreases to 48·7, 47·2, and 42·8 per cent. respectively, whilst in those of Gloucester and Northumberland it is reduced to 39·3, and 29·3 per cent. respectively.

The Hawkesbury Valley.

Maize, potatoes, and other crops are raised in the rich alluvial soil of the Hawkesbury Valley, included in the electorates of Hawkesbury, Nepean, and Wollombi, where the leasing of land, for farming purposes has attained a large proportion, 9,234 acres, or 30·3 per cent. of the area under crop being cultivated by tenant farmers. In the Nepean electorate 40·8 per cent., in that of the Hawkesbury 31·8 per cent., and in that of Wollombi 19·9 per cent., of the area cultivated is worked by leaseholders.

The Hunter River District.

The district embraced within the basin of the river Hunter is, as regards settlement, divided into two very distinct portions, the lower part being occupied by a mining and agricultural population, and the upper portion forming one of the most prosperous pastoral districts of New South Wales. In the Lower Hunter 6 per cent. of the alienated land is under cultivation, the proportion reaching 62 per cent., in West Maitland, maize, lucerne, potatoes, and grapes being the principal crops grown.

In addition to the area under crops in the Central Coast Division, 13,445 acres are laid down in permanent artificial grasses, making a total of 86,271 acres under cultivation. The number of persons engaged in agricultural pursuits has been returned at 11,098, of whom 2,567 were females, 1,570 of the latter being employed in the dairy, and 997 assisting otherwise in farm work; dairy industries occupied 629 males; whilst 7,902 men were engaged in purely agricultural occupations.

South Coast districts.

The south coast districts are principally devoted to the industry of dairy farming, and it is from Camden, Shoalhaven, Kiama, Illawarra, and Eden, that the metropolis derives most of the dairy produce which it requires for the daily consumption of its population. The area under cultivation, in the strict sense of the term, that is, irrespective of that laid down in permanent artificial grasses, is only 41,214 acres, or 3·1 per cent. of the total area of alienated lands. In the electorates of Kiama and Shoalhaven tenant farmers occupy a larger area than that which is cultivated by the landowners themselves, the proportion of land cultivated by tenants to the total area under crop being 62·1 and 53·8 per cent. respectively. In the electorate of Camden tenant farmers cultivate 40·5 per cent. of the total area under crop in the district, in that of Illawarra 40·1 per cent., and in the district of Eden only 20·1 per cent. of the whole area cultivated. It is probable, if the total extent of land occupied for agricultural and dairy purposes, which covers 189,648 acres, or 14·3 per cent. of the area alienated in the whole district, were considered, that the percentage of tenant holdings would be found still higher. Dairy produce forms the basis of the industry of this portion of New South Wales; and besides grasses the principal crops grown are maize and potatoes, which generally give excellent average returns. The area laid down in permanent artificial grasses in the district is 148,434 acres, so that a total area of 189,648 acres may be considered as devoted to agricultural and dairy operations, which employ a total of 12,593 hands, of whom 3,742 are females, the numbers of each sex engaged in purely agricultural work being 3,941 males and 533 females, and in dairy industries only 4,910 men and 3,209 of the opposite sex.

North Coast districts.

The north-coast districts, comprising the electorates of the Hastings and Manning, the Macleay, Grafton, Clarence, and the Richmond, altogether contain 115,756 acres of land under crop, or 7·0 per cent. of the area alienated, which is computed at 1,658,445 acres. The proportion of the area farmed by tenant occupiers and the proprietors themselves is as follows:—Area cultivated by owners, equals 74,398 acres, or 64·3 per cent.; area cultivated by tenants, 41,358 acres, or 35·7 per cent. In the electorates of the Macleay and Grafton the proportion of area cultivated by tenants is greater, reaching 42·7 and 43·8 per cent.; but on the Hastings and Manning, the Clarence, and the Richmond, this proportion only attains 34·5, 32·7, and 29·1 per cent. of the total area cultivated. The proportion of land cultivated to that alienated is 7·0 per cent. for the whole district, but this does not include the area laid down in grasses for dairy purposes, which covers 94,417 acres, the total area devoted to agricultural or dairy purposes in the north-coast district amounting, therefore, to 210,173 acres, or 12·7 per cent. of the area alienated. The dairy industry is rapidly assuming large proportions in the two electorates just mentioned, but the principal crops raised are maize and sugar, the latter being the chief industry of the more northerly-situated electorates of the Richmond and the Clarence Rivers, with some acres in that of the Macleay. The number of persons employed in agricultural occupations, including dairy farming, was in all 10,835, of whom 1,595 were females. Of the latter 1,166 were employed in the dairy and 429 assisted in farm work; whilst the males engaged in purely agricultural pursuits numbered 8,564, and 676 attended to dairy industries.

Districts favourable for farming.

The agricultural future of the north-coast districts certainly looks very bright, as there is no scarcity of land suited to the purpose of the farmer, and the climate is favourable to the growth of all the natural productions of sub-tropical and temperate zones.

The lack of means of transport has been the principal drawback to the progress of agricultural settlement in this district; however, the question of providing railway communication throughout its extent has now received the attention of Parliament.

The Central tableland.

Passing on to the table-land and looking at the state of its agriculture, it will be seen that in the Central portion, including the electorates of East and West Macquarie, Hartley, Orange, the Upper Hunter, Mudgee, Wellington, Molong, and Carcoar, the area under crop amounted to 161,954 acres, or 3·6 per cent. of the area alienated, which is computed at 4,565,250 acres. East and West Macquarie and Orange, are the leading agricultural electorates of the group. In these the proportion of land cultivated to the area alienated is 7·5, 10·1, and 10·0 per cent. respectively; the decrease observable in these proportions, when compared to former years is due to the fact that, owing to unfavourable circumstances, during the last two years, unusually large areas were allowed to lie fallow. In the surrounding electorates the proportion decreases until in the Upper Hunter the minimum of 0·6 per cent. is reached. The proportion of land cultivated by the landowners for the whole district equals 73 per cent., the remaining 27 per cent. being worked by tenant farmers, but this proportion does by no means represent the state of agricultural occupation in every electorate. In East and West Macquarie 25,723 acres, or 68 per cent. out of a total of 37,969 acres under crops this season, are cultivated by tenant farmers, almost the whole of it being under wheat, whilst the reverse proportion is the rule in the other electorates. Wheat is the staple crop of this district. The area laid down in artificial grasses covers 14,452 acres, the total area devoted to agricultural and dairy operations being, therefore, 176,406 acres, representing 3·9 per cent. of the area alienated. Upon this area a total of 13,220 persons, including 3,934 females, were employed, farming operations required 8,676 males and 1,848 females; whilst dairy industries absorbed the labour of 610 men and 2,086 women.

Southern tableland.

In the Southern division of the table-land, embracing the electorates of Goulburn, Argyle, Boorowa, Yass Plains, Queanbeyan, Braidwood, Monaro, Tumut, Young, and Gundagai, the area cultivated amounts to 133,897 acres or 2·2 per cent. of the alienated area, computed at 6,192,572 acres. The conditions of agricultural occupation differ very much from those which obtain in the coast electorates and also in the older settled portion of the central table-land. Cultivation is carried on here and there in a desultory sort of fashion as an addition to grazing, which is by far the more important of the two occupations.

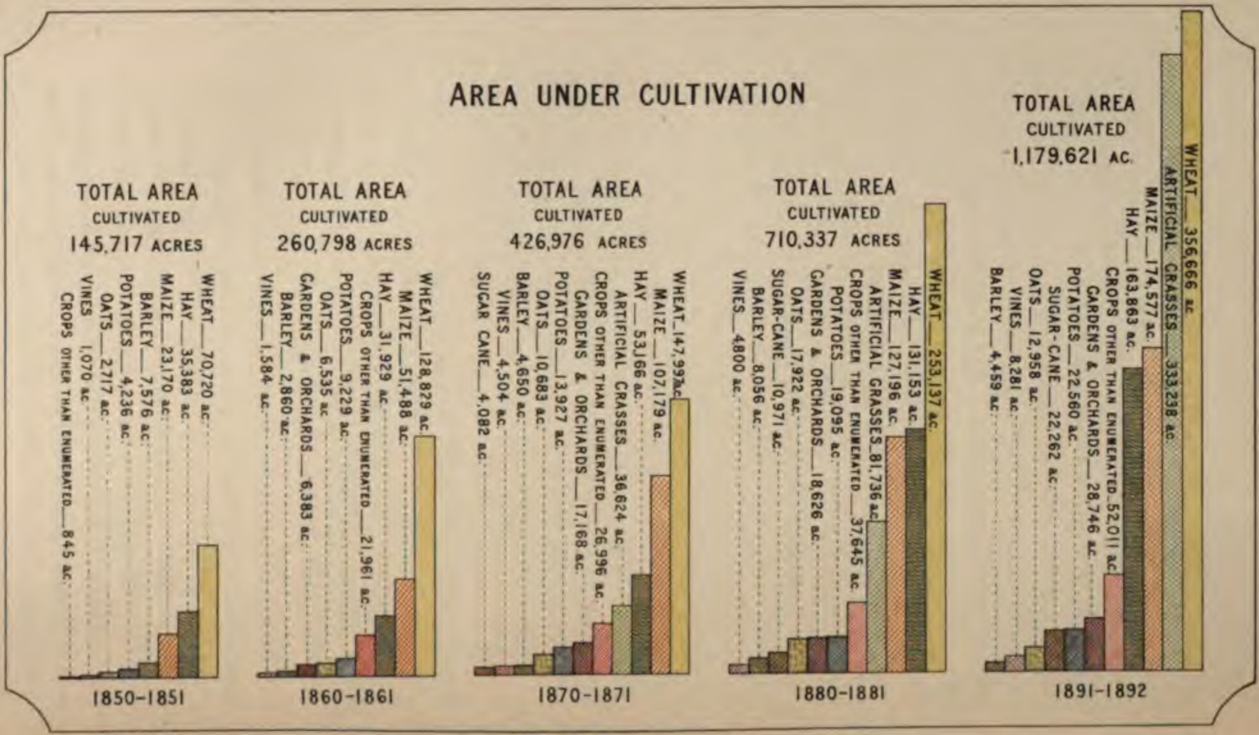
A few years ago tobacco culture made very great strides in the districts of Gundagai and Tumut, but an excessive production of leaf, prepared in an inferior manner and difficult of sale, caused a shrinking of this industry; many growers, particularly the Chinese, have abandoned its cultivation for that of maize, and in some instances have taken to raising vegetables for the metropolitan market. The proportion of land cultivated by tenant occupiers is only 17·3 per cent., 82·7 per cent. of the land under crop being cultivated by the landowners themselves. The total area upon which agriculture and dairy farming are carried on, including 21,889 acres laid down in permanent artificial grasses, extends over 155,786 acres.

The total number of persons employed in agricultural and dairy occupations was 12,876, of whom 4,642 were females; farming employing 7,515 males and 2,878 females; and dairy pursuits, 719 men and 1,764 women. Wheat, oats, barley, maize, potatoes, and tobacco are the principal crops raised in this division.

Northern tableland.

In the northern portion of the table-land a similar state of affairs exists, but the proportion of land under crop to the total area alienated is still further reduced, there being only 56,239 acres, or 1·8 per cent. cultivated out of 3,097,695 acres alienated in this division, which embraces the electorates of Tenterfield, Glen Innes, Inverell, New England, and Tamworth. Private tenancy of land is reduced to much smaller proportions than is

AREA UNDER CULTIVATION



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the case in the districts in which agriculture is carried on independently of grazing, as only 4,323 acres, or 7·7 per cent. of the area under crops is cultivated by tenant occupiers. In addition to the area under crops last season, 12,251 acres were laid down in artificial grasses, so that a total area of 68,490 acres may be considered as devoted to this branch of an industry which gave employment to 5,769 persons, of whom 2,006 were females, 1,038 of the latter being employed in the dairies, and 968 assisting on farms, whilst there were 3,527 male hands occupied in agricultural pursuits, and only 236 engaged about the dairies. Wheat, oats, and maize are the principal crops raised in this district.

The Western slopes.

The districts situated on the western slopes of the Great Dividing Range are almost essentially devoted to stock raising, and little need be said on the subject of agriculture; in the Central Division, nevertheless, this industry shows signs of development, in the electorates of the Bogan, Forbes, and Grenfell, principally on the banks of the river Lachlan, and the immediate vicinity of the towns of Forbes, Grenfell, and Parkes. The area cultivated in this district covers in all 35,024 acres, mostly held as yet by the original selectors, although 2,046 acres are reported as being cultivated by tenants. There were also 2,461 acres laid down in grasses, the total area devoted to agriculture being, therefore, 37,485 acres, upon which 3,605 persons, including 1,321 females, found employment last season, 1,195 of the latter assisting on the farms and 126 in the dairies, whilst 2,193 males were engaged in agricultural and 91 in dairy work.

Northern Division.

In the Northern Division, including the electorates of Gunnedah, the Namoi, and the Gwydir, the progress of agriculture is less rapid, being confined to that portion of the district of Gunnedah adjoining that of Tamworth, and a few patches along the banks of the rivers in the immediate vicinity of townships and village settlements. The total area cultivated in this extensive region is 8,340 acres, of which 7,686 are worked by the proprietors of the soil, and 654 by tenant farmers. There are also 716 acres under grasses, making a total of 9,056 acres devoted to agriculture in this district, where employment was found last year for 1,735 persons, of whom 897 were females; 665 of the latter assisted in farm work and 232 were engaged in the dairy, whilst 773 men were employed in purely agricultural operations, and 65 in the dairies. South-western Division. In the South-western Division, including the electorates of The Hume, The Murray, The Murrumbidgee, and Albury, cultivation is rapidly extending on lands some years ago declared to be unfitted for agricultural settlement. In the above electorates an aggregate area of 191,306 acres is under crop, principally wheat, whilst a fairly large area is devoted to the cultivation of the vine. Most of the lands under crop are cultivated by their owners, only 25,723 acres being worked by tenants. Agriculture is also extending along the banks of the Murray and the Murrumbidgee, and there is statistical evidence that we must look forward to that part of the country as the future granary of New South Wales. In addition to the large area actually under crop, 11,555 acres were laid down in permanent grasses, making a total of 202,861 acres in all being thus devoted to agriculture, giving employment to 6,553 persons, of whom 1,922 were females; 1,400 of the latter assisted in farm labour, and 522 were employed in the dairies, whilst, of the male hands, 4,436 followed purely agricultural pursuits, and 195 were engaged in dairy industries. As regards the Western Plains great Western Plains, extending on either side of the river Darling to the confines of Queensland, South Australia, and Victoria, no agriculture worthy of the name is carried on, market gardens and a few orchards supplying the towns of Bourke, Wilcannia, and Wentworth, and the now flourishing mining centres of Broken Hill and Silverton, and a few isolated wheat and oat paddocks, are the only attempts made at cultivating the soil over this immense region, in which, under an intelligent system of irrigation and water conservation, thousands of acres of excellent alluvium could be reclaimed from their pristine aridity and rendered as valuable for agricultural purposes as are now the irrigation colonies of Mildura and Renmark, so successfully developed under the excellent system of irrigation introduced by the Canadian brothers, Chaffey. In addition to an area of 8,706 acres under crops in the Western Division there were also 242 acres laid down in grasses, making a total of 8,948 acres devoted to agriculture. Although the area under crops is small, most of the cultivated land being used for market gardens and orchards, the number of persons employed is comparatively large, there being 1,120 persons, of whom 589 were females engaged in agricultural pursuits. Dairy operations only absorbed a small proportion of this labour, viz., 62 males and 58 females.

New South Wales a pastoral country.

It will be readily understood from the above analysis that New South Wales is essentially a pastoral country, and that, with the exception of a few districts where agriculture has taken a hold, the cultivation of the soil is quite secondary to stock-breeding, This circumstance is by no means due to the lack of good land, nor may it even be ascribed to the defects of the climate, for New South Wales possesses land, the capabilities of which for producing any kind of agricultural produce are unsurpassed, and its climate is certainly superior to that of other parts of the Australian Continent where the cultivation of cereals has been carried on for years past. Taken as a whole the yield of crops in New South Wales is larger than that obtained in any other continental colony, but, on the other hand, communication with the metropolitan market is much more difficult. Agriculture cannot be developed unless access to the markets be rendered both easy and cheap, and to secure this desirable end in a country so vast, and with so small a population as New South Wales, is a matter of time and expenditure. Under existing circumstances stock-rearing is an occupation the results of which are far more remunerative whilst entailing considerably less physical labour and personal inconvenience; but as population increases and there remains no more land to be taken up for grazing purposes, agricultural pursuits must be resorted to under the pressure of an ever-increasing demand. As it is, however, the area devoted to agriculture affords permanent employment to a fair proportion of the working population of New South Wales; the area actually under crops varies, owing to a variety of circumstances, but there is a steady increase in the surface cleared in view of its extension. At the census taken in April, 1891, the area reported under crops was 852,704 acres, in addition to which 280,839 acres were lying fallow, 388,715 acres were laid down in grasses, and 1,166,228 acres cleared and prepared for future cultivation, of which by far the greater proportion—viz., 613,419 acres—were situated in the Southern Division of the Colony, 393,713 acres being cleared in the East Central Division, 150,575 acres in the Northern, and only 8,521 acres in the Western Plains. During 1891 there was a slight decrease in the area under crop, which was reduced to 846,383 acres. The number of persons reported as employed in agricultural and dairy farming pursuits last season was 84,924 of whom 23,575 were females. Of this number 52,999 males and 11,762 females were engaged in purely farming operations, whilst the dairy industry gave employment to 8,350 males and 11,813 females. If to these numbers are added 32,364 persons engaged in pastoral pursuits, it is estimated that rural occupations absorb the energies of 117,288 persons.

Department of Agriculture.

The importance of agriculture is clearly recognized by the State, and a Department of Agriculture was formed at the beginning of the year 1890 and placed under the administration of the Secretary for Mines, whose title was altered to that of Secretary for Mines and Agriculture. The question of providing technical agricultural education, and establishing a college and model farms in various parts of the country, immediately engaged the attention of the Director, and a site suitable for a central establishment was selected at Ham Common, near the town of Richmond, in the Hawkesbury district, where an area of about 4,000 acres was resumed and is now occupied for this purpose.

Quantities and value of produce.

The principal crops at present grown in the Colony are wheat, maize, oats, barley, potatoes, sugar-cane, tobacco, grapes, oranges, and other fruits. The quantities produced in the year ended

March–April, and the value of each crop is given in the following statement, the values being the average for the whole Colony at the time the harvest was gathered.

Estimated Value of Agricultural Produce, 1891–92.

Crops.	Production or Area.	Value.
		£
Wheat	3,963,668 bushels	759,703
Maize	5,721,706 ,,	667,532
Barley	93,446 ,,	10,513
Oats	276,259 ,,	27,626
Rye	11,390 ,,	2,278
Millet	5,079 ,,	889
Hay	209,417 tons	732,959
Straw	25,211 ,,	56,725
Green food	32,138 acres.	144,621
Potatoes	62,283 tons.	249,132
Sugar-cane	185,258 ,,	138,943
Tobacco	9,314 cwt.	15,213
Grapes	3,694 tons	51,716
Oranges	10,417,500 dozen	86,812
Onions	312 tons	1,248
Turnips	1,070 ,,	2,675
Mangel Wurzel	430 ,,	1,075
Market gardens	Value as per Agricultural Return	188,946
Orchards	,, ,,	211,790
Chicory	13,208 cwt.	6,604
Peas and Beans	13,608 bushels	2,040
Pumpkins and Melons	14,827 tons	37,067
Wine	913,107 gallons	159,794
Unspecified crops	Value as per Agricultural Return	28,589
	Total Value......... £	3,584,490

The value of the agricultural produce of New South Wales for each year since 1880 is given below; the figures for the three years previous to 1891 have been corrected, as the value of certain kinds of produce had been slightly over-estimated :—

Year.	Value.	Year.	Value.
	£		£
1880	2,930,794	1886	3,943,645
1881	4,194,346	1887	4,151,692
1882	3,304,891	1888	3,298,759
1883	3,806,182	1889	4,459,861
1884	2,836,697	1890	4,136,887
1885	3,375,882	1891	3,584,490

WHEAT.

Principal centres of cultivation.

In the early days of settlement the Hawkesbury River Valley and the country adjacent to the towns of Parramatta, Liverpool, Penrith, Camden, and Maitland were the principal centres of wheat cultivation. Unskilful farming, and the consequent exhaustion of the soil, with the attendant evils of rust, smut, and other diseases, caused these districts to be abandoned little by little as wheat country, and on the discovery of the Bathurst Plains their importance at once ceased. The districts of Bathurst, Goulburn, Gundagai, Tumut, Young, Monaro, and New England were each in turn occupied by agriculturists, and the suitability of their soil and climate, as well as that of the whole of the mountain plateau, for the growth of this cereal became definitely established.

Cultivation very irregular.

The cultivation of this grain during the past thirty years has been very irregular. For some years prior to 1867 the area of land under crop remained almost the same from year to year, being little more than 125,000 acres. In 1867, however, the wheat area had increased to 175,000 acres, and at that acreage it remained practically unaltered for twelve years. Then, again, more land was laid under wheat, and in 1878–9 the area had increased to 233,252 acres. Since then the area of land under this cereal has been greatly extended, and during the year 1887–8 there were reaped 389,390 acres, an area larger than in any previous year; and an increase of 51,660 acres, or 15·3 per cent. above the area under this crop in 1887. During 1888–9 the area under wheat for grain fell to 304,803 acres, and owing to the severity of the season much of this area was not reaped, as the poorness of the crop would not pay the farmers to harvest it. The total production of the wheat-fields of the Colony amounted to only 1,450,503 bushels, equal to an average of 4·8 bushels per acre, which was the smallest return ever experienced in New South Wales. But the prospects of the season 1889–90 induced the farmers to increase the area under wheat for grain, the total area reaching 419,758 acres, and the production 6,570,335 bushels, which is the largest crop ever harvested in New South Wales, though the average yield of 15·7 bushels per acre has often been exceeded in the past; 356,666 acres were cropped with wheat in 1891–92, the yield from which was 3,963,668 bushels, averaging 11·1 bushels to the acre. The average yield during the whole of the period, which extends from 1863 to the season which ended on 31st March, 1892, was 13·1 bushels, the lowest yield being 4·8 bushels, obtained in 1888–9, the most bountiful, 17·4 bushels per acre, gathered during 1886–7. During the first ten years of the period named, from 1863 to 1872, the yield per acre appears to have been comparatively a small one, the mean being only 10·9 bushels. Thence followed a period of fair seasons, extending over seventeen years, when the average fluctuated between a minimum of 10·5 bushels obtained in the season of 1885–6, and a maximum of 17·4 in the season 1886–7, with a mean of 14·6 bushels per acre for the whole period, 1871–2 to 1887–8.

Average yield.

Season of 1892-3.

The prospects of the coming season, 1892–3, appear very encouraging. It is expected that, partly as a consequence of improving prospects, and partly as a result of the taxation now being imposed upon the imports of cereals, a larger area will be placed under cultivation than in the previous year. The climatic conditions, so far, have been very propitious, and great expectations are entertained of the probable results of the coming season's crop.

The following statement shows the state of wheat cultivation since the year 1863:—

Cultivation of wheat.

Area under Wheat—Yield per Acre.

Year ended 31 March.	Area of crop.	Bushels.	Yield per acre.
	Acres.		Bushels.
1863	108,136	1,054,954	9·75
1864	103,942	808,919	7·78
1865	104,568	1,246,458	11·92
1866	131,653	1,013,863	7·69
1867	175,033	2,226,027	12·72
1868	149,142	1,433,807	9·61
1869	164,206	1,787,085	10·88
1870	189,452	3,200,959	16·89
1871	147,997	999,595	6·75
1872	154,030	2,229,642	14·48
1873	177,551	2,898,463	16·32
1874	169,330	2,273,620	13·43
1875	166,911	2,148,394	12·87
1876	133,609	1,958,640	14·66
1877	145,608	2,391,979	16·43
1878	176,686	2,445,507	13·84
1879	233,252	3,439,326	14·74
1880	233,368	3,613,266	15·48
1881	253,137	3,717,355	14·69
1882	221,887	3,405,966	15·35
1883	247,361	4,042,395	16·35
1884	289,757	4,345,437	15·00
1885	275,249	4,271,394	15·52
1886	264,867	2,733,133	10·45
1887	337,730	5,868,844	17·37
1888	389,390	4,695,849	12·06
1889	304,803	1,450,503	4·75
1890	419,758	6,570,335	15·65
1891	333,233	3,649,216	10·95
1892	356,666	3,963,668	11·11
Average yield for thirty years			13·10

Average yield in quinquennial periods.

Dividing the last quarter century into quinquennial periods, the means were :—

Quinquennial period.	Average per acre.
1868–1872	11·72 bushels.
1873–1877	14·74 ,,
1878–1882	14·82 ,,
1883–1887	14·94 ,,
1888–1892	10·90 ,,

Various districts compared.

The increased yield of the period since 1873 is partly due to improved farming; but, at the same time, it must not be lost sight of that the occurrence of rust, smut, and other forms of disease in wheat has been less frequent and less general of recent years. Grouped according to the proportion of land under wheat during 1890 and 1891 to the total area, the districts stand as follow :—

Districts	Proportion of land under wheat to whole area of district.	
	1890–91. Acres.	1891–92. Acres.
Young	1 in 36	1 in 36
Gundagai	42	42
Bathurst	73	61
Orange, Molong, and Carcoar	76	80
Murray Valley	127	110
Yass and Boorowa	229	253
Tamworth	244	212
Murrumbidgee	176	152
Mudgee	314	331
Goulburn	337	341
Tumut	541	627
Monaro	769	963
Wellington and Bogan	610	570
Hunter Valley	1,024	994
Glen Innes, Inverell, and Tenterfield	833	671
Forbes and Grenfell	951	820
New England	1,327	1,183
Namoi and Gwydir Valleys	5,966	6,531

Area of wheat cultivation in districts.

The area of land under wheat in the remaining districts of the Colony is so small as not to be worth taking into consideration, and is therefore neglected in the ensuing comparisons. Owing to the alteration of the boundaries of the electoral districts in 1881, comparison by electorates is not possible beyond that year. Taking the ten years which have elapsed since the season 1882-3, the total area under wheat in each district was:—

Area under Wheat, in Acres.

Districts.	1882-3.	1883-4.	1884-5.	1885-6.	1886-7.	1887-8.	1888-9.	1889-90	1890-1	1891-2.
Goulburn ..	9,598	9,452	9,289	5,661	7,787	9,126	3,505	7,706	4,902	4,844
Yass	12,552	15,732	14,824	12,701	16,824	17,596	10,745	15,751	10,472	9,500
Wellington and the Bogan.	10,463	12,722	12,700	11,153	20,170	17,722	16,445	19,901	17,190	18,386
Monaro	10,253	10,917	10,922	7,072	9,892	13,466	6,880	10,876	7,384	5,891
Murray River Valley	38,705	45,493	45,792	50,097	54,240	74,080	64,548	70,729	63,423	73,088
Orange	45,045	52,294	47,890	45,564	59,721	55,033	41,157	62,936	43,275	41,070
Gundagai ..	12,004	15,390	15,412	18,438	20,108	24,253	20,998	30,572	24,071	23,833
Forbes	5,858	9,285	8,156	7,775	11,558	12,545	7,063	14,204	10,613	12,300
Murrumbidgee	4,357	13,143	11,799	19,793	26,204	46,309	45,254	62,663	61,249	71,001
Tamworth ..	11,750	14,275	12,644	12,838	16,543	16,179	9,737	15,768	10,076	11,596
New England	7,687	7,836	7,486	6,201	7,047	8,186	3,524	6,159	3,440	3,857
Namoi and Gwydir Valleys.	3,226	3,436	3,617	4,114	5,485	5,989	4,209	4,068	2,879	2,630
North Coast..	547	531	503	270	218	288	302	237	60	155
Glen Innes..	8,771	8,321	9,465	8,241	8,789	10,401	6,152	8,927	7,578	9,399
Young	16,750	21,964	18,978	21,582	28,609	34,119	31,891	42,918	35,801	35,928
Hunter River Valley.	8,058	8,288	7,750	6,499	8,326	8,235	5,479	7,704	4,826	4,973
Bathurst....	25,573	21,456	20,269	12,858	18,817	18,889	10,736	21,276	14,627	17,525
Mudgee	9,851	12,163	11,586	10,125	12,749	11,511	11,705	12,333	7,235	6,870
Tumut......	3,283	3,698	2,926	2,185	2,739	3,405	2,720	3,144	2,701	2,332
South Coast.	359	364	261	141	138	152	164	159	118	78
Hawkesb'y & Nepean.	2,274	2,763	2,797	1,333	1,597	1,351	1,273	1,417	992	778
Western Districts.	214	230	159	220	166	551	312	310	321	632

Agriculture gaining ground

The foregoing figures are instructive, as they throw considerable light upon the history of wheat cultivation and agricultural settlement in New South Wales. Although the interval under examination is a short one, extending over a period of ten years only, great changes are shown to have taken place in parts of the country hitherto devoted mainly to pastoral occupation. It is also

Increase of agriculture in Riverine District.

interesting to note that agriculture is gaining ground in those districts where the greater number of the huge freehold estates, accumulated by pastoralists under the auction sales and improvement clauses of the Land Act of 1861, are situated. It is in the valleys of the Murray, the Murrumbidgee, and the Lachlan that the struggle between squatter and selector has been fiercest, and where the most remarkable increase of agricultural settlement both as regards wheat-growing and agriculture generally is now exhibited. The following statement, showing the total area of land cultivated in the districts abutting on the three great rivers above-mentioned, in the years ended March 1882 and 1892 respectively, will serve to illustrate this point :—

Districts.	Total Area under Cultivation.	
	In 1882.	In 1892.
	Acres.	Acres.
The Murray Valley	55,763	109,270
The Murrumbidgee	13,045	93,591
Forbes and Grenfell	12,429	22,276
Gundagai	13,295	28,813
Yass Plains and Boorowa	16,194	16,543
Young	21,132	47,449
Total	131,858	317,942

Murrumbidgee district.

By far the greater proportional increase is exhibited in the case of the Murrumbidgee electoral district, where the total area under cultivation has increased fully seven times in ten years ; whilst the figures for the other districts show an increase of nearly 89 per cent. It is also worthy of remark that the area under cultivation in these districts represents 37 per cent. of the total area tilled in New South Wales.

As regards the cultivation of wheat for grain only, it will be seen that in most of the above-mentioned districts it has taken the largest share of the total increased area placed under cultivation during this short period of ten years. In the Murrumbidgee the area under this crop has increased to nearly thirteen times what it was in 1881–2; in that of Young it has grown from 13,316 acres to 35,928 acres; in that of Gundagai, from 9,150 acres to 23,833 acres; and in the Murray River Valley, from 38,928 acres to 73,088 acres; whilst in the districts of Forbes and Grenfell it has increased in proportion to that of the general cultivation. Reverting to the examination of the whole of the principal wheat-growing districts of New South Wales, the average yield per acre for the last nine years will be seen below:—

Average yield per acre.

Wheat.—Average Yield per Acre, in Bushels.

Districts.	1883-4.	1884-5.	1885-6.	1886-7.	1887-8.	1888-9.	1889-90.	1890-1.	1891-2.	Mean.
Goulburn	13·3	17·1	9·5	18·9	10·7	5·1	14·5	11·1	15·0	12·8
Yass	14·2	17·0	11·1	17·7	11·5	4·2	14·2	9·3	9·4	12·1
Wellington & Bogan...	14·1	17·2	6·4	16·2	12·9	2·6	18·7	9·6	12·2	12·2
Monaro	14·9	16·6	11·4	17·0	15·9	8·1	15·6	12·5	14·3	14·0
Murray Valley	13·6	9·6	12·1	14·4	10·2	7·7	10·9	12·5	11·3	11·4
Orange	16·7	15·7	9·9	18·3	11·8	3·8	18·9	9·1	9·4	12·6
Gundagai	15·8	18·4	11·4	20·2	12·6	5·6	18·6	11·1	9·3	13·7
Forbes	15·1	13·4	7·9	20·5	11·3	4·2	22·5	10·3	11·6	13·0
Murrumbidgee	14·4	14·4	8·0	19·9	11·1	3·4	16·1	11·0	11·6	12·2
Tamworth	16·0	16·3	10·1	14·7	15·1	4·0	7·7	11·3	13·1	12·0
New England	19·3	20·1	15·4	17·1	16·7	10·1	14·0	12·3	13·9	15·4
Namoi and Gwydir....	15·7	15·9	8·7	13·9	13·3	2·6	9·5	12·0	13·8	11·7
North Coast	22·2	18·2	16·6	13·9	21·3	18·6	15·1	20·9	17·0	18·2
Glen Innes	19·6	20·5	19·2	13·8	17·8	5·9	12·6	16·0	17·6	15·9
Young	13·4	17·5	9·9	19·2	11·0	3·5	18·4	10·4	9·2	12·5
Hunter River Valley...	15·4	15·6	8·4	16·8	12·9	3·7	12·7	9·5	10·2	11·7
Bathurst	11·9	14·8	8·2	16·4	12·2	1·7	14·7	10·4	10·4	11·2
Mudgee	14·1	18·1	6·3	19·0	12·9	0·5	15·7	8·3	9·1	11·6
Tumut	19·0	23·6	14·2	20·0	14·3	13·4	15·2	15·7	13·9	16·6
South Coast	22·6	23·0	17·1	14·6	17·4	15·5	18·2	20·4	16·0	18·3
Hawkesbury and Nepean.	13·9	13·2	12·8	16·3	12·0	8·8	8·8	9·8	9·7	11·7
Western District......	10·8	9·4	5·5	12·6	9·0	0·8	10·7	13·2	16·6	9·8
Average for whole Colony.	14·9	15·5	10·4	17·3	12·1	4·7	15·6	11·0	11·1	12·5

Average yield of districts compared.

Comparing now the returns of the various districts, but leaving aside those of the North and South Coast, where the area under wheat is too small to afford a reliable test of their wheat-growing capabilities, it will be seen that Tumut, Glen Innes, and New England have given the largest as well as the most consistent yield during the whole period. This is what might have been anticipated. The situation of these districts on the high plateau of the main range dividing the coastal region of the Colony from the Great Western Plains, places them under conditions as to climate and rainfall similar to those which obtain in the richest wheat-growing countries of Europe and America.

Monaro, Gundagai, Forbes, Goulburn, Orange, and Young follow next, in the order named, as regards yield per acre, which in each case may be considered fairly good. The Murrumbidgee, Wellington, Yass, and Tamworth also yield a fair average crop. The scale sensibly decreases in the other districts of the Colony, which, with the exception of Bathurst and the Hunter Valley, are situated on the confines of the lower slope of the main range, and the great plains of the interior.

Decrease in yield as descent is made to plains.

It may be stated as a general law that those districts situated on the higher table-lands of the main Dividing Range are the best adapted to the cultivation of wheat, and that the average yield decreases in an almost constant ratio as a descent is made towards the plains, where the average falls as low as in similar formations in South Australia and Victoria. Bathurst is the only exception to this general rule, but as it is in the district in which the greater quantity of wheat is grown, as compared with the total area, the reason of its small average annual yield must be sought apart from the circumstances of its geographical situation. It may be that the constant succession of crops has injured the productiveness of the soil, and brought about a decreased yield in the district where cultivation has been most continuous.

Rainfall in wheat centres.

The average rainfall over some of the most important wheat-growing centres during the year 1891 will be found below, together with the average for a series of years. In the abundant and timely rainfall of 1889 will be found the immediate cause of the fine harvest which was almost everywhere experienced in that year. A copious rainfall does not, however, necessarily ensure a correspondingly good harvest; if it were so, the results of the two last seasons should have been much better than they actually were.

District.	1891. Inches.	Average. Inches.	District.	1891. Inches.	Average. Inches.
Goulburn	42·3	25·8	Tamworth	31·9	25·6
Yass........................	39·1	26·6	New England.........	40·3	29·8
Wellington..............	29·1	19·0	Bathurst...............	30·9	23·6
Monaro	40·9	22·7	Mudgee	33·3	24·6
Murray	25·3	21·7	Glen Innes............	38·7	26·5
Orange and Carcoar...	39·1	19·0	Young..................	34·0	26·6
Gundagai.................	28·2	21·0	Hunter Valley	40·3	19·0
Forbes	29·8	15·5	Tumut..................	36·0	28·5
Murrumbidgee	26·4	15·4			

Average yield of New South Wales compared with other colonies.

If the average production of wheat per acre in New South Wales be compared with that of the other colonies of the Australasian group, it will be found that this Colony occupies a very satisfactory place. Its average is greater than that of any other portion of continental Australia, although somewhat less than the Tasmanian yield, and considerably below that of New Zealand. The following table shows the average produce of each Australasian Colony since 1875.

Average Yield of Wheat in Bushels per Acre in Australasia for the Years ended 31st March, 1875–92.

	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	Mean.
New South Wales	12·87	14·66	16·43	13·84	14·74	15·48	14·69	15·35	16·35	15·00	15·52	10·45	17·37	12·06	4·75	15·65	10·95	11·11	13·74
Victoria	14·57	15·49	13·15	12·41	8·76	13·29	9·95	9·40	9·03	14·10	9·52	8·99	11·49	10·81	7·10	9·75	11·13	10·26	11·07
Queensland	..	..	..	10·63	13·56	8·11	20·40	8·41	13·89	4·34	16·17	5·11	3·12	22·10	0·89	15·88	20·02	20·32	12·20
South Australia	11·75	11·95	5·40	7·76	7·15	9·78	9·96	4·57	4·21	7·94	7·53	7·53	7·53	9·75	3·85	7·91	5·62	4·15	7·46
Western Australia......	12·00	11·00	12·00	11·00	9·97	14·94	14·94	7·00	11·00	13·00	13·00	11·50	12·25	9·80	10·50	14·00	13·75	11·00	11·81
Tasmania	18·51	16·38	19·30	18·12	16·10	23·22	14·99	18·88	20·27	17·74	19·30	17·32	17·91	16·67	20·16	15·42	16·29	19·71	18·13
New Zealand	28·15	31·54	28·63	26·30	22·94	28·10	25·07	22·69	26·28	26·02	25·43	24·40	24·89	26·37	24·22	25·15	18·99	25·50	25·59

Comparison with other countries.

Compared with the majority of European countries, the yield of wheat must appear inconsiderable, both in regard to the total quantity obtained and the produce per acre. The return from some of the chief wheat-growing countries is given as follows :—

Wheat-growing Countries.	Average produce of wheat per acre.
	Bushels.
Denmark	31·1
United Kingdom	26·9
Norway	25·1
Belgium	21·5
Holland	21·5
Manitoba	20·3
Germany	18·8
France	16·9
Austria	16·4
British Columbia	15·0
Ontario	14·1
Hungary	13·6
Italy	12·1
United States	11·7
Quebec, Nova Scotia, and New Brunswick	9·9
Russia in Europe	4·6
New South Wales (for 30 years)	13·1
Australasia	14·6

Price of wheat.

The price of wheat is subject to constant fluctuations as the following table, giving the average rates ruling in the Sydney market in the months of February and March of each year, since 1864, will show. These figures exhibit clearly the tendency to a gradual reduction in the value of the cereal, the rate for 1890 being the lowest of the series. As New South Wales has never grown sufficient wheat for home consumption, the price of wheat in Sydney is generally governed by the rates obtained in the neighbouring Australian markets, where a surplus is produced. This, again, is now determined by the figures realized in London, which is usually equal to that ruling in Adelaide, plus freight and charges. The prices in the following table are for an imperial bushel, and, being for new wheat, are slightly below the average of the year.

Wholesale Prices of Milling Wheat in the Sydney market during the months of February and March, 1864-92.

Year.	February.	March.	Year.	February.	March.
	per bushel.	per bushel.		per bushel.	per bushel.
	s. d.	s. d.		s. d.	s. d.
1864	7 0	7 6	1879	5 0	4 9½
1865	9 6	9 7½	1880	4 8	4 9
1866	8 4½	8 0	1881	4 1	4 3
1867	4 3	4 4	1882	5 5	5 6
1868	5 9	5 9	1883	5 1½	5 2
1869	4 9	4 10	1884	4 3	4 3
1870	5 0	5 1½	1885	3 10½	3 7½
1871	5 7½	5 9	1886	4 3½	4 5
1872	5 0½	5 3	1887	3 10	3 11
1873	5 1	5 8½	1888	3 6	3 6½
1874	6 9	6 1½	1889	4 9	4 9
1875	4 7½	4 6	1890	3 6	3 6
1876	5 1½	5 6	1891	3 7½	3 10
1877	6 1½	6 6	1892	3 7½	3 10
1878	6 1½	5 7½			

WHEAT CROP OF THE WORLD.

The importance of Australasia in the wheat markets of the world is not great, since out of a total production of about 2,353 million bushels raised in 1891 only about 36 million bushels, Wheat production of the World.

or 1·5 per cent., were Australasian. The following statement, based on the returns of the U.S. Department of Agriculture, shows the approximate crop of the world for the year named:—

Countries.	Yield.
	bushels.
United States	611,780,000
Canada	57,533,672
Argentine States and Chili	47,256,500
Austria	41,143,750
Hungary	126,268,750
France	232,360,236
Germany	126,254,663
Great Britain and Ireland	77,016,151
Italy	126,801,916
Roumania, Bulgaria, and Servia	101,041,660
Russia and Poland	181,789,628
Spain	71,349,094
Turkey	33,008,640
Other European Countries	43,547,428
India	255,434,667
Other Asiatic Countries	144,272,340
Africa	40,803,996
Australasia (yield 1891–92)	35,955,838
Total	2,353,618,929

CONSUMPTION AND PRODUCTION OF BREADSTUFFS.

Production of wheat not equal to demand.

The production of wheat still remains considerably below the consumption. The accompanying table has been prepared with a view to illustrate the state of the Colony in this respect, and shows the total consumption of wheat, the home production, and the net deficiency for thirty years.

Apparent Consumption and Production of Breadstuffs in New South Wales.

Year.	*Apparent consumption.	†Available home production.	Net deficiency.	†Apparent consumption of wheat per head.	† Home produce per head.	Apparent deficiency.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1862	2,333,514	1,458,715	874,799	6·4	4·0	2·4
1863	1,867,639	912,234	955,405	5·0	2·4	2·6
1864	2,590,623	667,729	1,922,894	6·7	1·7	5·0
1865	2,487,146	1,072,727	1,414,419	6·2	2·7	3·5
1866	2,706,766	775,307	1,931,459	6·5	1·8	4·7
1867	3,188,730	2,023,832	1,164,898	7·3	4·6	2·7
1868	2,447,650	1,214,233	1,233,417	5·4	2·7	2·7
1869	2,794,180	1,535,998	1,258,182	5·9	3·3	2·6
1870	4,258,515	2,992,978	1,265,537	8·7	6·1	2·6
1871	2,503,487	796,055	1,707,432	4·9	1·6	3·3
1872	3,198,350	1,998,956	1,199,394	6·1	3·8	2·3
1873	4,064,706	2,680,177	1,384,529	7·5	4·9	2·6
1874	3,423,171	2,054,990	1,368,281	6·1	3·6	2·5
1875	3,856,142	1,964,678	1,891,464	6·6	3·4	3·2
1876	3,647,938	1,755,235	1,892,703	6·0	2·9	3·1
1877	3,624,066	2,134,070	1,489,996	5·8	3·4	2·4
1878	4,271,270	2,125,332	2,145,938	6·5	3·2	3·3
1879	4,763,241	3,116,015	1,647,226	6·9	4·5	2·4
1880	5,149,867	3,245,422	1,904,445	7·1	4·5	2·6
1881	4,267,446	3,390,710	876,736	5·6	4·5	1·2
1882	5,289,216	3,043,525	2,245,691	6·7	3·8	2·8
1883	5,023,507	3,618,514	1,404,993	6·0	4·3	1·7
1884	5,987,260	3,893,146	2,094,114	6·8	4·4	2·4
1885	6,520,784	3,808,908	2,711,876	7·0	4·1	2·9
1886	5,893,766	2,218,383	3,675,383	6·1	2·3	3·8
1887	7,809,642	5,306,682	2,502,960	7·8	5·3	2·5
1888	7,909,104	4,186,298	3,722,806	7·6	4·0	3·6
1889	6,524,438	1,444,000	5,080,438	5·9	1·3	4·6
1890	7,916,391	6,049,010	1,867,381	7·2	5·5	1·7
1891	6,261,027	3,120,340	3,140,687	5·5	2·7	2·8

* No account is taken of the quantity added to or taken from stocks as the case may be.
† Exclusive of wheat required for seed.

Consumption in different years compared.

In this table a higher figure is given for the available home production of 1889 than in previous ones. It is thought that a much more gloomy view of the harvest was taken in some districts than was justified by the actual results. What are believed to be the right figures have therefore been inserted. Taking the above table as it stands a false idea would probably be formed if the result of any one year were separately compared with that of any other, as it frequently happens that the transactions of one year affect the trade of the following year to a very large extent. Nevertheless the average yearly consumption, calculated over a series of years, may be ascertained from these figures with some degree of accuracy, and will be found to amount to 6·5 bushels per head of the mean population during a period of thirty years.

From the following table, in which account is taken of the position of the market at the end of each year and of the quantity by which the stock on hand was either increased or diminished during the year, the true average yearly consumption per head is ascertained to amount to 6·4 bushels, a result identical with that obtained by the former method. The true average consumption will however be found to alter very little from one year to the other, and to maintain itself at a figure closely approximating the general average of the period. The amount of home production for the year 1887, given in the table on page 307, is more than stated below. It is believed that about one million bushels were injured by rain, and therefore did not enter into consumption.

Consumption of Breadstuffs in New South Wales.

Year.	Stocks at end of year.	Stocks increased or diminished during year.	Local production in excess of seed.	Net import of flour and grain.	Total consumption.	For food only per head.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1877	310,000	....	....	....	....	....
1878	305,000	*5,000	2,125,000	2,146,000	4,276,000	6·50
1879	605,000	300,000	3,116,000	1,647,000	4,463,000	6·46
1880	1,000,000	395,000	3,245,000	1,904,000	4,754,000	6·55
1881	350,000	*650,000	3,391,000	877,000	4,918,000	6·46
1882	490,000	140,000	3,044,000	2,246,000	5,150,000	6·47
1883	300,000	*190,000	3,618,000	1,405,000	5,213,000	6·24
1884	310,000	10,000	3,893,000	2,094,000	5,727,000	6·50
1885	750,000	440,000	3,809,000	2,712,000	6,081,000	6·53
1886	320,000	*430,000	2,218,000	3,675,000	6,323,000	6·45
1887	470,000	150,000	5,307,000	2,503,000	6,653,000	6·56
1888	1,240,000	770,000	4,186,000	3,723,000	7,139,000	6·70
1889	590,000	*650,000	1,440,000	5,080,000	7,190,000	6·49
1890	800,000	210,000	6,049,000	1,867,000	7,716,000	7·00
1891	....	....	3,120,000	3,141,000	....	....

* Decrease during year.

Referring to the table showing the relation between the apparent consumption and the home production of breadstuffs, it will be seen that during the first half of the period covered by the table the production was slightly more than half the consumption, the deficiency being 47 per cent. In the second half of the series the home production had somewhat increased, so that the deficiency was scarcely 42 per cent.

Average yearly production.

It will be seen from the table last given, as well as from the preceding one, that New South Wales is still far removed from the position of being able to supply the wheat required for the food of its inhabitants. From the following summary table it would seem that in this respect the country is little better off than it was at the earliest period referred to in the table.

Period for which an average has been taken.	Consumption of wheat per head.	Home produce per head.	Deficiency per head.
Years.	Bushels per annum.	Bushels per annum.	Bushels per annum.
1862–66	6·2	2·5	3·7
1867–71	6·4	3·6	2·8
1872–76	6·4	3·7	2·7
1877–81	6·4	4·0	2·4
1882–86	6·5	3·8	2·7
1887–91	6·7	3·6	3·1

The deficiency for the last five years was 3 bushels per head, equivalent to 45 per cent. of the whole consumption. Taking for granted that the consumption of wheat will not be more than 6·5 bushels per head during 1893, the probable requirements for the coming year, exclusive of seed, will be 7,730,000 bushels, to obtain which, if a crop be reaped averaging, say, 13·1 bushels per acre, which is the mean production of New South Wales for the last thirty years, the breadth of land to be sown would need to be about 582,500 acres, or 225,800 acres more than the grain-producing area of the past season.

Deficiency per head.

The average consumption of wheat in New South Wales as shown above amounts to 6·5 bushels per head; a rate which is higher than that of most countries whose records have been available for reference; the excess over that of the United Kingdom being 0·6 bushels per head. The consumption includes what is used for all purposes except seed, a fact which must be borne in mind, as the quantity of flour used for the manufacture of biscuits and other articles, as well as for other than food purposes, is not inconsiderable.

Average Consumption.

The following is the average consumption for the principal countries:—

	Consumption per Head. (Bushels.)
United Kingdom	5·9
France	8·1
Germany	3·0
Russia	2·1
Austria	2·9
Italy	5·4
Spain and Portugal	6·4
Belgium and Holland	5·0
Scandinavia	1·4
Turkey	6·1
United States	5·4
Canada	6·6
Australasia	6·6

That of the Australasian Colonies will be found below:—

New South Wales	6·5
Victoria	6·0
Queensland	6·1
South Australia	6·5
Western Australia	9·3
Tasmania	6·7
New Zealand	7·5

The consumption of Victoria has been estimated from the quantity of flour made, less the net imports, as stated in the Victorian Year Book. The crop returns would give for the past five years an average consumption of 5·2 bushels. It will therefore be seen that there is no correspondence between the two sets of figures.

Importation of breadstuffs.

The relative proportions of flour and wheat imported have changed very considerably during the last twenty-five years, as will be seen hereunder :—

Average yearly Import of Flour and Wheat.

Period.	Flour in equivalent of wheat.	Wheat.
	Bushels.	Bushels.
1862–66	1,066,893	801,765
1867–71	905,540	750,705
1872–76	1,012,105	838,388
1877–81	1,529,140	545,914
1882–86	2,534,645	613,180
1887–91	3,193,010	1,180,417

Decline in quantity of wheat imported.

These figures would seem to warrant the supposition that the mill-power of the Colony is deficient, but this is only a partial view of the case. A comparison between the importation of flour and the total home consumption gives an entirely different result, as will be seen from the next table. The figures in each case are the yearly averages for the different periods :—

Comparison between amount of Flour Imported and Made in the Colony.

Period.	Total consumption of flour in equivalent of wheat. — Yearly average.	Flour imported for home consumption in equivalent of wheat. — Yearly average.	Flour manufactured in the Colony in equivalent of wheat. — Yearly average.	Percentage of flour manufactured in the Colony to whole consumption. — Yearly average.
	Bushels.	Bushels.	Bushels.	
1862–66	2,397,139	644,208	1,752,931	73·1
1867–71	3,038,512	610,080	2,428,432	79·9
1872–76	3,638,081	804,697	2,833,384	77·8
1877–81	4,415,178	1,170,720	3,244,458	73·5
1882–86	5,742,906	1,885,220	3,857,686	67·2
1887–91	7,159,761	2,275,402	4,884,359	68·2

Mill-power and consumption.

It will be seen from the above table that though the mill-power of the Colony, or rather the manufacture of flour, has hardly kept pace with the increase in consumption, the actual quantity of flour manufactured yearly has increased from an average of 1,752,931 bushels to 4,884,359 bushels.

The change in the character of the imports noted above, that is, the substitution of flour for grain, is attributable to a change in the markets whence the supply is drawn, Victoria having to a large extent superseded South Australia. The prominence of Victoria as an exporter of breadstuffs to New South Wales dates from 1878, and the excess of flour over wheat exported by that Colony is very pronounced. South Australia, whence the chief supply of New South Wales was formerly drawn, and from which large quantities are still obtained, has, since the competition of Victoria became formidable to her, greatly diminished the proportion of wheat to flour, so that latterly the quantity of South Australian wheat sent to this Colony has been comparatively insignificant. Of late years New Zealand has become an important factor in the grain market, and the general failure of the crop of 1888–9 throughout continental Australia operated greatly in favour of that Colony, whose crop was as bountiful as that of the rest of Australasia was scanty.

Export of breadstuffs.

The export of breadstuffs from New South Wales represents for the most part a re-export of foreign produce, Queensland being the chief buyer. In the year 1881 the export, which had previously been small, suddenly increased threefold. And though showing a decline during the succeeding years it still retains respectable proportions, the average during the last five years being 25 per cent. of the total quantity imported.

Wheat grown for hay.

Wheat is also grown in considerable quantities for hay and dry fodder for cattle, and the area under cultivation is steadily increasing, although the produce is still short of the requirements of the country. The whole of the wheat grown for hay in the Colony is consumed locally. The following statement shows the extent of land under wheat for hay, with the yearly produce, during sixteen years:—

Area under Wheat for Hay, and Yield.

Year ended 31 March.	Acres.	Produce in tons.	Average per acre.	Year ended 31 March.	Acres.	Produce in tons.	Average per acre.
1877	17,115	21,297	1·24	1885	86,584	87,328	1·01
1878	29,640	29,137	0·98	1886	105,122	74,606	0·71
1879	22,888	31,320	1·36	1887	74,070	109,851	1·48
1880	25,281	32,943	1·30	1888	60,340	70,392	1·16
1881	41,137	44,037	1·07	1889	102,838	42,041	0·41
1882	39,428	42,378	1·07	1890	82,880	140,348	1·69
1883	42,592	43,997	1·03	1891	83,827	96,014	1·15
1884	49,348	55,119	1·12	1892	66,435	75,883	1·14

Cultivation of wheat for hay increasing.

From the foregoing figures it will be seen that the cultivation of wheat for hay is increasing at a much greater ratio than for grain, the area so cultivated having reached in 1888–89 six times that cultivated for the same purpose in 1877; since then the area devoted to hay was not so large, the seasons being generally so propitious that a greater proportion of the total area sown with wheat was allowed to come to grain than in former years. Long series of dry years may in some measure account for the increased area devoted to hay, but the steady demand for hay and chaff, wheaten as well as oaten, and the large import of this produce, fully justify an extension of its cultivation. There still exists a considerable difference between the demand for hay and the supply from within the Colony, as there was in 1890 a net import of 32,494 tons of hay and chaff, principally for consumption in the Metropolitan district, and 57,713 tons in 1891; but this difference is well within the capacity of the Colony to produce.

The total area under wheat in 1891, both for grain and for hay, was 423,101 acres, producing 3,963,668 bushels of grain, 25,211 tons straw, and 75,883 tons of hay, the value of all kinds of produce being £1,055,252.

MAIZE.

Principal centres of cultivation.

The cultivation of maize is almost as important as that of wheat, and forms the staple industry in the valleys of the coastal rivers, which are peculiarly adapted, both by soil and the climate, for the growth of this cereal. On the table-land also its cultivation is attended with fair results, but as the land rises in elevation so does the average produce per acre proportionately decrease. Attempts have been made to grow maize in the western division of the Colony, but success has only been met with under special conditions of natural or artificial irrigation, for the plant demands a considerable amount of moisture, and thrives better in the moist climates of the coast than anywhere else in the country. Although the area under maize is much less than that under wheat cultivation, the gross yield obtained, measured in bushels, is frequently as large as, and in some seasons greatly exceeds, that of wheat.

Distribution of production.

The following statement shows the distribution of the production of maize during the seven years which ended with March, 1892, as well as the average yield obtained in each district :—

Maize.—Average Yield per Acre in Principal Districts.

District.	1885-6	1886-7	1887-8	1888-9	1889-90	1890-1	1891-2	Mean.
	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels
Tamworth and New England	19·0	18·0	23·0	12·4	16·2	20·9	19·5	18·4
Macleay	43·2	34·6	24·7	34·6	41·2	24·5	37·7	34·3
Hastings and Manning......	33·9	31·6	22·0	34·2	31·0	38·3	36·3	32·5
The Clarence	33·6	20·9	45·0	33·6	31·3	41·5	36·4	34·6
The Richmond	30·0	25·8	23·8	32·3	31·3	30·5	34·4	29·7
Grafton	31·3	18·1	45·0	36·7	33·9	43·3	36·8	35·0
Gloucester	29·7	30·6	21·0	26·4	28·1	26·3	31·7	27·7
Glen Innes	23·8	19·3	23·0	19·8	19·8	22·6	21·7	21·4
Hunter River Valley	29·8	27·4	24·1	27·0	28·0	25·3	34·9	28·1
Mudgee....	22·8	20·6	25·9	5·3	26·7	23·3	26·7	21·6
Tumut	44·5	35·6	40·9	45·3	40·3	30·9	36·9	39·2
Hawkesbury and Nepean Rivers' Valleys.	33·1	29·6	28·5	28·0	24·5	25·9	31·9	28·8
South Coast	33·5	22·6	36·9	31·4	36·2	34·7	34·3	32·8
Other districts	15·1	17·9	21·8	12·6	21·4	19·7	19·1	18·2

Coast production largest.

It will be seen that the average production is greatest in the north and south coast districts. In the Hawkesbury and Nepean and the Hunter River valleys, where cultivation extends to a greater distance from the coast, and is under altered circumstances as to rainfall, the yield is somewhat less; while in the higher part of the country the decline is very appreciable, for in the districts of Tamworth, New England, and Mudgee, the average yield is little more than half of that of the north coast.

Favourable condition of the district of Tumut.

The district of Tumut appears, however, to be an exception to the general rule, as the yield is almost as large and even more regular than in the coast district. But the area under maize cultivation at Tumut is hardly large enough to justify any deduction being drawn from its exceptional yield. It may, however, be noted that Tumut stands at the head of the other agricultural districts as regards its high and well sustained average yield of wheat and other grain crops, a circumstance attributable to the general excellence of the soil, and the fairly abundant and regular supply of rain with which the district is favoured. The relative position of the districts where maize is principally grown is as follows:—

Maize-growing in various districts.

Districts.	Average per acre for the period 1885–1891.	Maximum average per acre for any one year.	Minimum average per acre for any one year.
	Bushels.	Bushels.	Bushels.
North Coast	33·3	36·3	27·6
Tumut	38·2	45·3	30·9
South Coast	33·1	36·9	22·6
Hawkesbury and Nepean	28·7	33·1	24·5
Hunter River	28·2	34·9	24·1
Glen Innes	21·4	23·8	19·3
Tamworth and New England	18·8	23·0	12·4
Mudgee	22·8	26·7	5·3
Other districts, where maize is not grown in large quantities	19·0	21·8	12·6

Increase in area devoted to maize.

The area under maize cultivation was increased from 57,959 acres in the year 1862 to 174,577 in 1892, and was therefore more than trebled in thirty years. Considered in the light of the general advance of settlement, particularly in those districts where this cereal may be successfully cultivated, there is nothing remarkable in the progress thus exhibited, especially as there is no lack of land in New South Wales fit for maize cultivation. The fact is, nevertheless, worthy of notice, that in the year 1888 an additional area of 24,705 acres was laid down with maize for grain, a much greater increase than was shown during any of the previous twenty-five years, with the exception of the year 1879, when 25,072 acres were added to the area under maize; last year the area showed a decrease of 16,575 acres, principally in the Macleay district where many farmers, discouraged by the low price realised for this cereal, are putting their land to other uses.

State of maize cultivation.

The following table shows the state of maize cultivation in the Colony during the period referred to—1863 to 1892 inclusive:—

Maize—Area under Crop, and Yield.

Year ended 31 March.	Area under crop.	Yield.	Average per acre.	Year ended 31 March.	Area under crop.	Yield.	Average per acre.
	Acres.	Bushels.	Bushels		Acres.	Bushels.	Bushels
1863	75,991	2,559,258	33·6	1879	130,582	4,420,580	33·8
1864	95,689	2,925,950	30·5	1880	135,034	4,761,856	35·2
1865	101,584	3,114,212	30·6	1881	127,196	4,518,897	35·5
1866	113,443	2,759,904	24·3	1882	117,478	4,330,956	36·9
1867	119,519	3,878,064	32·4	1883	118,180	4,057,635	34·3
1868	115,522	3,132,505	27·1	1884	123,634	4,538,604	36·7
1869	120,807	3,777,405	31·2	1885	115,600	3,389,505	29·3
1870	128,041	4,880,805	38·1	1886	132,709	4,336,163	32·6
1871	107,178	2,340,654	21·8	1887	146,957	3,825,146	26·0
1872	119,956	4,015,973	33·4	1888	171,662	4,953,125	28·8
1873	116,745	3,984,958	34·1	1889	166,101	4,910,404	29·5
1874	116,648	4,128,865	35·3	1890	173,836	5,354,827	30·8
1875	118,436	3,618,436	30·5	1891	191,152	5,713,205	29·9
1876	117,582	3,410,517	29·0	1892	174,577	5,721,706	32·8
1877	116,364	3,879,537	33·3				—
1878	105,510	3,551,806	33·6	Mean for 30 years			31·7

Average produce per acre.

The production per acre, as may be gathered from the foregoing figures, is a somewhat variable item, ranging from a minimum of 21·8 bushels, which was obtained in the year 1871, to a maximum of 38·1 in 1870.

The following table, compiled for the purpose of showing the annual movement of the maize market for the last ten years, also shows the yearly requirements for home consumption :—

Year.	Production.	Import.	Export.	Balance in favour of Export.	Consumption.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1882	4,075,635	41,093	179,289	138,196	3,919,439
1883	4,538,604	114,927	303,394	188,467	4,350,137
1884	3,389,505	110,061	216,956	106,895	3,282,610
1885	4,336,163	116,600	399,526	282,926	4,053,237
1886	3,825,146	94,673	196,996	102,323	3,722,823
1887	4,953,125	272,104	337,204	65,100	4,888,025
1888	4,910,404	152,010	342,093	190,083	4,720,321
1889	5,354,827	237,660	366,063	128,403	5,226,424
1890	5,713,205	563,721	30,811	Import. 532,910	6,246,115
1891	5,721,706	290,786	17,626	273,160	5,994,866

Future of maize-growing.

The future of this branch of agricultural industry seems limited to the supply of local wants, as New South Wales is adjacent to several maize-producing countries which are already commencing to compete with her in her own markets. Until 1890 the Colony produced more than could be locally consumed, and exported a small quantity to her southern neighbours ; but since then, owing to a sudden increase in the demand for maize, the reason for which is not apparent, the large production of the seasons 1890 and 1891 would seem to have been insufficient, 806,000 bushels of grain having been imported. As, however, the deficiency in the crops had not the usual result of causing a very sensible increase in the prices paid to the New South Wales farmers, it is a matter of some doubt whether this large importation had not for its object the keeping of a stock of grain in the hands of dealers sufficiently large to prevent a hardening of the wholesale prices. In such case the deficiency in the production would be more apparent than real. However this may be, it does not seem probable that this branch of farming can be expanded with much profit to the growers, unless the local consumption should become considerably increased.

Maize as green food.

Maize is not only cultivated as a grain crop, but a small area is sown for green food for cattle, chiefly on dairy farms. In 1891 the area thus cultivated was 4,686 acres, the greater part in the Camden and South Coast districts, and the electorate of Molong. The total area cultivated with maize in 1892 was 179,263 acres.

OATS.

Principal centres of oat cultivation.

This cereal is cultivated as a grain crop, principally in the wheat-growing districts of the Colony; and as it is essentially a produce of cold climates it thrives best in those parts of the country with a winter of some severity. Bathurst, Carcoar, Orange, The Hume, Monaro, and New England are the principal centres of oat cultivation, but the latter district yields the best crops. The average of the Colony for 1891–92 is 21·3, which may be considered a fair yield. The Northern Tableland averaged 22·8 bushels, Tenterfield heading the list with 26·9. In the southern coast districts the average was 21·2, and the south-western slopes yielded at the rate of 24·1 bushels to the acre.

No oats are grown in the northern portion of the coastal districts for the purpose of a grain crop. In the southern coast districts the area under oats for grain is very limited, but that under oats for hay or green food is not inconsiderable. The following table illustrates the state of the cultivation of this crop since 1862 :—

Area in cultivation.

Oats.—Area under Crop, and Yield.

Year ended 31 March.	Area.	Production.	Average per acre.	Year ended 31 March.	Area.	Production.	Average per acre.
	Acres.	Bushels.	Bushels.		Acres	Bushels.	Bushels.
1862	7,224	152,426	21·1	1878	18,580	358,853	19·3
1863	9,988	201,415	20·2	1879	22,129	447,912	20·2
1864	13,022	213,924	16·4	1880	23,883	516,937	21·6
1865	14,098	189,524	13·4	1881	17,922	356,121	19·9
1866	10,939	116,005	10·6	1882	16,347	356,566	21·8
1867	14,914	304,028	20·4	1883	24,817	617,465	24·9
1868	13,142	156,965	11·9	1884	17,810	376,635	21·1
1869	12,129	164,687	13·6	1885	19,472	425,920	21·9
1870	17,301	400,766	23·2	1886	14,117	279,107	19·8
1871	10,683	119,365	11·2	1887	23,947	600,892	25·1
1872	13,795	280,887	20·3	1888	19,393	394,762	20·3
1873	13,586	270,967	19·9	1889	7,984	109,931	13·8
1874	16,524	322,449	19·5	1890	22,358	543,330	24·3
1875	17,973	293,135	16·3	1891	14,102	256,659	18·2
1876	18,855	352,966	18·7	1892	12,958	276,259	21·3
1877	21,828	461,916	21·2				

Cultivation of oats for grain.

It will be seen that the cultivation of oats for grain has been very irregularly pursued during the period embraced by this table, rising rapidly during the earlier years and remaining practically stationary since 1877. The market for oats is chiefly in the metropolitan district, and the demand depends largely upon the price of maize.

Average yield per acre.

The average production of oats for the period 1862–92 was 19·8 bushels per acre, the minimum obtained in any year being 10·6 bushels in the season 1865-66, and the maximum 25·1 bushels in that of 1886–87. Compared with the other continental Colonies, New South Wales holds, in regard to average yield, the second rank, Victoria coming first, but both these colonies are surpassed by Tasmania and New Zealand. The climate of those two colonies is much more adapted for the successful cultivation of this grain, the average produce of New Zealand in particular being very nearly equal per acre to that of the United Kingdom, and on a par with the best oat-producing countries of the Old World.

Average yield of oats per acre in N.S. Wales and other colonies.

In the following table figures will be found giving the average produce per acre in each of the Australasian Colonies during seventeen years, the records for Queensland alone being incomplete.

Average Production of Oats in Bushels per Acre in the Australasian Colonies.

Colonies.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	Mean.
New South Wales......	16·31	18·72	21·16	19·31	20·24	21·64	19·87	21·81	24·88	21·15	21·87	19·77	25·08	20·35	13·77	24·30	18·20	21·32	20·54
Victoria	18·46	21·92	19·91	19·39	17·60	24·00	17·62	24·57	26·17	25·07	23·40	21·72	22·91	22·02	14·20	23·87	22·26	23·43	21·63
*South Australia........	14·61	16·69	10·65	11·96	12·01	15·02	11·50	10·66	11·13	14·65	12·20	12·20	12·20	12·20	5·65	12·76	9·32	6·40	11·76
Queensland	..	..	..	10·11	9·65	24·74	17·94	12·74	16·58	8·90	15·17	4·84	10·41	24·26	5·65	19·41	21·82	23·31	15·03
Western Australia......	16·00	15·00	15·00	14·00	18·02	19·00	19·00	10·00	15·03	17·00	18·00	14·50	16·00	15·13	23·42	20·00	19·50	14·00	16·59
Tasmania..............	26·82	25·40	24·21	22·32	24·82	28·61	22·13	28·44	27·34	27·39	28·65	26·82	25·95	18·20	27·97	28·60	25·04	30·91	26·09
New Zealand	35·22	37·79	31·24	31·68	30·11	36·53	32·05	28·45	32·89	35·11	34·84	26·11	30·02	31·24	29·89	32·09	28·73	34·03	32·16

* No returns were collected from 1886 to 1889.

The average yield in the principal countries of the world where oats are extensively grown is as follows:—

Average yield in principal countries.

Principal oat-growing countries.	Average produce of oats per acre.
	Bushels.
Holland	42·1
Belgium	41·8
Norway	39·7
United Kingdom	37·7
Denmark	32·3
France	26·0
United States of America	26·0
Germany	21·9
Austria	20·9
Hungary	20·2
Italy	19·3
Russia	12·3
Cape of Good Hope	8·1
New South Wales	21·9

Cultivation of oats neglected.

The cultivation of oats as a staple agricultural crop has been much neglected in New South Wales, though the return has not been unsatisfactory. It is possible that in the near future this grain will receive greater attention, especially as the deficiency between the production and the consumption is very considerable. The elevated districts of Monaro, Argyle, Bathurst, and New England, in preference to other parts of the Colony, contain vast areas of land where the cultivation of oats could be carried on with remunerative results.

Oats as a fattening food.

In connection with this subject it may not be generally known that the relative nourishment of oats exceeds that of either maize or wheat, weight for weight. If 100 be taken as the value of oats for fattening purposes, the respective values of equal weights of the other cereals are:—

Oats	100
Wheat	70
Maize	62

And for equal measures:—

Oats	100
Wheat	131
Maize	107

The production of this grain is far from satisfying the wants of the Colony, and the importation is, therefore, very large, 1,470,746 bushels of the estimated value of £145,389, having been imported from abroad in the year 1891. New Zealand is the principal source of supply, the quantity obtained from that colony in 1891 being 1,324,988 bushels. Much yet remains to be done before the Colony can be independent of outside assistance in regard to the supply of oats, as, for some years past the average quantity produced was only 25 per cent. of the amount consumed, and there would thus be an ample market within New South Wales for the produce of 62,000 acres more than is usually reaped.

Supply from New Zealand.

In parts of the Colony where the climate is not suitable for maturing the grain, a large area is sown for hay. The area under oats for this purpose has increased from 28,109 acres in 1862 to 126,488 acres in 1887, being over four and a half times as large in the latter as in the former year. In 1888 the area under oats for hay had fallen to 86,451 acres, and it was slightly lower in 1889. In 1890, however, there was an increase to 103,129 acres, but last year the area had fallen to 76,589. Oaten hay is much in demand, and sells readily at remunerative prices; and, as there is less expense and lighter labour attached to this form of cultivation, the system of growing oats for hay is consequently more in favour with the farmers of New South Wales than the cultivation of the grain. The area under the two crops stood to each other in the following relation in the year 1891-92:—

Oaten hay in demand.

Oats for hay and green food.

Area under oats for grain	12,958 acres.
Area under oats for hay	76,589 ,,
Total	89,547 acres.

The area harvested for grain was only 14·1 per cent. of the total area sown with oats. The following statement shows the cultivation of oaten hay since 1877, and the yield per acre:—

Cultivation of Oats for Hay.

Year ended March.	Area.	Produce.	
		Total.	Per acre.
	acres.	tons.	tons.
1877	77,212	98,901	1·28
1878	79,333	87,660	1·10
1879	61,684	75,138	1·21
1880	67,877	84,915	1·25
1881	68,758	77,811	1·13
1882	86,088	100,773	1·17
1883	112,477	140,979	1·25
1884	107,451	113,899	1·06
1885	121,922	149,489	1·22
1886	96,946	72,484	0·75
1887	126,488	182,921	1·44
1888	86.451	96,126	1·11
1889	85,439	40,753	0·47
1890	103,129	156,920	1·52
1891	70,463	71,305	1·01
1892	76,589	86,077	1·12

Oats for green food.

In addition to the area cultivated for grain and hay, a small extent of land is yearly sown for green food ; last season 2,003 acres of oat lands were so used. The total area under oats during the year ending 31st March, 1892, was therefore 91,550 acres.

BARLEY.

Limited cultivation of barley

The cultivation of barley is very limited, the total area under grain in 1890 being only 5,440 acres,—less than it was twenty-six years ago, but decreased to 4,459 acres in 1892. The following table illustrates the state of barley cultivation since the year 1862. It will be seen that the production of 1889 was less than in any year of the series, 1863 alone excepted, but in 1892 the production amounted to 93,446 bushels.

Cultivation of Barley for Grain.

Year ended 31 March.	Area under barley for grain.	Production.	Year ended 31 March.	Area under barley for grain.	Production.
	Acres.	Bushels.		Acres.	Bushels.
1862	3,924	41,054	1878	5,055	99,485
1863	2,538	30,636	1879	6,152	132,072
1864	4,093	67,009	1880	6,130	131,541
1865	4,724	60,355	1881	8,056	163,395
1866	5,844	58,370	1882	6,426	135,218
1867	6,211	91,741	1883	6,473	133,050
1868	5,140	62,392	1884	5,081	106,496
1869	6,397	94,715	1885	7,035	148,869
1870	9,152	148,617	1886	5,297	85,606
1871	4,650	47,701	1887	6,079	132,949
1872	3,462	55,284	1888	4,402	84,533
1873	3,727	70,708	1889	3,318	36,760
1874	3,559	66,225	1890	5,440	113,109
1875	3,984	69,053	1891	4,937	81,383
1876	4,817	98,756	1892	4,459	93,446
1877	5,662	134,158			

Barley grown in the Murray Valley.

Nearly one-fourth of the whole acreage under barley is to be found in the central table-land, and a large proportion is produced in the western slopes and table-land of the Southern Division. The electorates having the largest area of barley for grain are Tamworth, Hastings and Manning, and the Upper Hunter. Very little barley is cultivated in the northern part of New South Wales, although it might be grown successfully in the New England district.

Average production.

The average production per acre during the season 1891–92 was 20·96 bushels per acre, or equal to 1·54 per cent. above the average for the previous ten years, which amounted to 19·42 bushels. The condition of this industry is due to the small and uncertain demand for the grain within the Colony.

Quantity of barley imported.

In 1891 the net quantity of barley imported to make up the deficiency of home production amounted to 60,933 bushels, valued at £7,663, principally obtained from Victoria and New Zealand. It would therefore require a very little effort on the part of the farmers to bring the production of this grain up to the level of the consumption.

Barley for green food for cattle.

An area very nearly equal to that cultivated for grain is usually laid down for hay, and for the purpose of providing green fodder for cattle. During last season the figures were 4,459 acres of barley for grain; 2,667 acres of barley for hay and green food, the total area cultivated being 7,126 acres.

PRODUCTION AND CONSUMPTION OF GRAIN.

The total consumption of grain of all kinds in New South Wales, calculated on the basis of the last ten years, amounts to 13·5 bushels per head of population, whilst the produce of the Colony is only 9·4 bushels. The deficiency in the production of wheat amounts to 40·7 per cent., barley, 36·3 per cent., and oats, 74·6 per cent. There is, however, an excess in the production of maize over the local consumption, amounting to 0·9 per cent., which reduces the total average deficiency in the production of the principal grain crops to 30 per cent. There is no apparent reason why the local production of grain should not equal the local demand; on the contrary, the resources of the Colony are such that under normal conditions the supply of grain should largely exceed the requirements, and an increasing excess of production become yearly available for export, either as grain or meat.

N.S.W. yield greater than other colonies.

The experience of past years distinctly shows that in the matter of soil, climate, and other natural conditions, New South Wales is, on the whole, better favoured, and consequently her average yield per acre of wheat, maize, and barley, is greater than that of any other continental Australian province, Victoria not excepted. Extending the field of comparison, the production of cereals is found to reach an average which places New South Wales on a level with countries usually considered as rich agricultural states. It is better than the average yield of the United States, of Italy, and Hungary; and, in some respects, almost on a level with that of Germany, Austria, and France. The area adapted for cereal growing is very considerable, and with a better knowledge of the capabilities of the various kinds of soils and well devised means of water storage, there should be practically no limit to the production of grain.

Standard weight of a bushel.

The weight of a bushel of wheat varies from 57½ to 63 lb., according to grade; but the standard, as enforced by an Act of Parliament, assented to on the 10th February, 1880, for this and other kinds of grain is stated to be as below:—

Wheat	60	lb. to the	bushel.
Maize	56	,,	,,
Barley—Cape	50	,,	,,
,, English	52	,,	,,
Oats	40	,,	,,
Rye	60	,,	,,
Peas	60	,,	,,
Beans	60	,,	,,

MINOR GRAIN CROPS.

The minor grain crops harvested are rye, millet, and sorghum. Little can be said on this subject except that, as in the case of other cereals, the suitability of the soil for their production is an established fact. There is, however, so little demand for these kinds of grain that their cultivation in New South Wales is very limited.

The area under rye for grain in 1891 covered 720 acres, the produce from which was 11,390 bushels, or at the rate of 15·8 bushels to the acre. There were also 307 acres of rye sown for green food. Rye.

Millet was only cultivated over an area of 912 acres, 297 of which were harvested for grain, the remaining 615 acres being cut green for cattle. The greater part of the crop of millet was obtained in the Hunter River valley. The average production of the Colony amounted to 17·1 bushels per acre. Millet.

The cultivation of sorghum for grain appears to have been abandoned, but the area sown in 1891 for green food for cattle amounted to 7,268 acres, chiefly within the dairy farming districts of Kiama, Illawarra, and Shoalhaven. Sorghum.

SOWN GRASSES, AS FOOD FOR CATTLE.

The area sown under green food and grasses for cattle is constantly increasing in the Colony, and in the course of the year 1891 there were under artificial grasses 333,238 acres. Lucerne is grown in considerable quantities on the Hunter River Flats, and the cultivation of this fodder is extending throughout the country, principally along the banks of the rivers on the western slope of the Great Divide. The total acreage under lucerne in 1891 was returned at 19,861 acres, cut for hay, and producing 45,867 tons of fodder, in addition to which there were 15,570 acres of lucerne paddocks. Lucerne.

Permanent grasses are laid down principally in the Hunter districts, and the South Coast, 148,434 acres being thus cultivated in the South Coast districts alone. The practice of sowing permanent grasses is also extending to the North Coast districts, and in 1891 there were 53,685 acres under grass in the Richmond Artificially sown grasses.

electorate. It is, however, in those portions where dairy farming is principally carried on that the practice of laying down permanent grasses is most general.

POTATOES.

Area under potatoes.

The cultivation of the potato has shown little improvement for many years past. In regard to acreage under crop, the area planted last year was the largest recorded. At present the Colony has to make up by importation from the other colonies a considerable deficiency, which in 1891 amounted to 51,680 tons, or nearly 50 per cent. of the total consumption for the year. The total yield during the same season amounted to 62,283 tons. The following table illustrates the state of the cultivation of potatoes during each year since 1863 :—

Total production and yield per acre.

Area under Potatoes, and Yield.

Year ended 31 March.	Acres.	Tons.	Year ended 31 March.	Acres.	Tons.
1863	9,284	24,167	1878	13,862	34,957
1864	11,618	32,141	1879	16,724	53,590
1865	14,398	52,061	1880	19,271	62,228
1866	15,210	31,367	1881	19,095	52,112
1867	18,810	43,870	1882	15,943	44,323
1868	15,440	33,482	1883	14,462	43,461
1869	16,391	30,768	1884	14,953	36,977
1870	17,132	54,200	1885	12,417	31,335
1871	13,927	34,118	1886	15,166	38,695
1872	14,770	44,758	1887	17,322	45,803
1873	15,124	45,112	1888	20,915	61,455
1874	14,212	42,281	1889	15,419	36,839
1875	13,604	38,564	1890	17,551	50,096
1876	13,805	41,203	1891	19,406	52,791
1877	14,171	42,939	1892	22,560	62,283

Principal centres of cultivation.

The centres of potato-growing at present are Orange, Carcoar, Argyle, and New England. Its cultivation is, however, very widely distributed throughout the Colony, but in many places formerly well-known for its production, it has been largely displaced by maize and other cereals.

TOBACCO.

Soil and climate of New South Wales suited for tobacco.

Both the soil and climate of New South Wales are well fitted for the growth of the tobacco plant. Tobacco, however, demands for its proper cultivation special knowledge on the part of the growers, and for this reason is not so largely cultivated as would otherwise be the case. In the year 1863, the first shown on the subsequent table, there were only 896 acres under cultivation, producing 15,315 cwt. of leaf tobacco. In the following years, however, the area had largely increased, chiefly in the agricultural districts of Argyle and the Hunter River valley. Since then the growth of tobacco seems to have been almost entirely abandoned in the districts where it was first attempted, but has spread to other parts of the Colony; the Tumut, Macquarie, Murrumbidgee, and Gundagai electorates being now the principal centres of production. Nearly three-fourths of the tobacco grown in 1891 was obtained in these districts, but its cultivation is chiefly in the hands of Chinese, few European agriculturists apparently possessing the knowledge required for the proper cultivation and preparation of the leaf.

Chinese principal cultivators.

Area and production.

From the year 1881 the area devoted to the cultivation of tobacco very largely increased, and it is a noteworthy fact that the quantity of locally grown leaf used now furnishes a large proportion of the total quantity manufactured in the Colony. In the year 1889 there was a large increase in the acreage under tobacco, the area being more than four times that of 1887, with a corresponding increase in the yield of leaf. As the local leaf does not compare favorably with the American, it could not be exported profitably, and the consequence was that a large proportion of the leaf remained upon the farmers' hands, and the quantity that was sold realised very unsatisfactory figures. The natural result was that many of the farmers have since abandoned the cultivation of tobacco in favour of that of maize. Last year there was a great falling off in the area under tobacco, and the yield therefrom.

The following table shows the progress of the industry during the last thirty years:—

Cultivation of Tobacco.

Year ended 31 March.	Area.	Production.	Year ended 31 March.	Area.	Production.
	Acres.	Cwt.		Acres.	Cwt.
1863	896	15,315	1878	399	3,049
1864	534	4,851	1879	835	7,932
1865	807	4,036	1880	592	6,221
1866	1,499	7,469	1881	1,791	19,469
1867	1,326	2,478	1882	1,625	18,311
1868	627	6,035	1883	1,815	17,540
1869	875	7,925	1884	1,785	20,006
1870	366	3,192	1885	1,046	9,914
1871	225	700	1886	1,603	22,947
1872	567	4,475	1887	1,203	13,642
1873	440	2,751	1888	2,371	23,465
1874	199	1,261	1889	4,833	55,478
1875	539	6,069	1890	3,239	27,724
1876	491	4,098	1891	1,148	14,021
1877	333	2,440	1892	886	9,314

Over production of tobacco.

The total consumption of manufactured tobacco and cigars during 1891 was 3,328,899 lb., of which 2,042,388 lb. were made in the Colony out of 639,148 lb. of American leaf and 1,403,240 lb. locally grown. The production for 1892 is equal to 1,043,168 lb., and allowing one-third for damage and waste, there will still remain 695,445 lb., a quantity little more than half the probable requirements. As the production of the years previous to 1891 was larger than the local requirements, stocks of leaf had accumulated, so that there was last year a supply amply sufficient for the season's requirements. For this reason, and owing also to a decline in the prices offered by manufacturers for locally grown leaf, an opinion was expressed in last year's issue of this volume that a further decrease would probably be noticed in the area cultivated. This opinion has been verified by the fact that the area under tobacco for 1892 has become reduced to 886 acres, producing only 9,314 cwt. of leaf, tobacco culture having therefore shrunk to nearly one-sixth of what it was in 1889.

SUGAR-CANE.

Introduction of the sugar-cane in New South Wales.

The first agricultural returns in which mention is made of the cultivation of the sugar-cane and the production of sugar in New South Wales only date from 1863. In that year 2 acres were returned as having produced 280 ℔. of sugar, and it will appear strange that out of this quantity 220 ℔. were stated to be the produce of one acre of cane, grown in the northern part of the county of Bathurst, while the remaining 60 ℔. were produced on the banks of the Macleay River. The district last mentioned may be considered as the principal seat of this industry, during its earlier stages. Cane cultivation, however, soon extended to the northward, and in a very few years the richest portions of the lower valleys of the Clarence, Richmond, Tweed, and Brunswick, were occupied by settlers engaged in the planting and growing of cane, Mills were erected in the chief centres of cane cultivation, and cane-growing and sugar manufacturing are now the principal and best established industries of the north-eastern portions of the Colony.

Northern rivers suit sugar-cane.

The soil and climate of the valleys of the northern rivers are in most respects well adapted to the successful cultivation of the sugar-cane. Occasional spring frosts, however, cause considerable damage, and it was the risk of failure from this cause which led the settlers on the Macleay to seek a warmer climate farther north, free from the danger arising from frost. In this they may be said to have succeeded, though in the Clarence, Richmond, and Tweed valleys, frosts are not altogether unknown.

Progress of sugar-growing.

The following table shows the progress of this industry during the last thirteen years. The figures relating to the area yearly placed under cane are obtainable for earlier dates, but the number of tons produced cannot be ascertained prior to 1876. The sugar-cane not being an annual crop, the area under cultivation has been divided, as far as practicable, into productive and non-productive, the former representing the number of acres upon which cane was cut during the season, and the latter the area over which it was unfit for the mill, or allowed to stand for another year.

Progress of sugar-growing

Area and Production of Sugar-cane.

Year.	Area.		Total.	Production in tons of cane.
	Productive.	Non-productive.		
	Acres.	Acres.	Acres.	
1863	....	....	2	....
1864	....	....	22	....
1865	....	....	141	....
1866	....	....	116	....
1867	....	....	647	.. ..
1868	....	....	2,584	....
1869	....	....	3,917	....
1870	1,475	2,607	4,082	....
1871	1,995	2,399	4,394	....
1872	3,470	2,001	5,471	....
1873	3,565	3,105	6,670	....
1874	4,087	4,453	8,540	.. ..
1875	3,654	2,800	6,454	....
1876	3,524	3,231	6,755	99,430
1877	3,331	3,735	7,066	99,978
1878	2,949	4,489	7,438	104,192
1879	3,675	4,102	7,777	126,119
1880	4,465	6,506	10,971	121,616
1881	4,983	7,184	12,167	128,752
1882	6,362	7,176	13,538	169,192
1883	7,583	7,401	14,984	204,547
1884	6,997	10,520	17,517	105,323
1885	9,583	6,835	16,418	239,347
1886	5,915	9,202	15,117	167,959
1887	8,380	6,907	15,287	273,928
1888	4,997	10,284	15,281	110,218
1889	7,348	11,382	18,730	168,862
1890	8,344	12,102	20,446	277,252
1891	8,623	13,639	22,262	185,258

Increase of area under crop.

The figures contained in the above table show the gradual progress of the sugar-growing industry, from the small beginnings of 1863. From the starting point of this cultivation until 1884 there is no break in the yearly increase of land put under cane. During the four succeeding years, however, there was a tendency to retrogress, and the area cultivated in 1888 was less by 2,236 acres than in 1884, or 12·7 per cent.; an increase took place in 1889, which has been gradually maintained during the following years, the area under cane having reached 22,262 acres in 1892. The low price of sugar and the disturbed state of the markets of the world a few years ago, forced the sugar manufacturers to correspondingly reduce the price offered for the canes, and so caused the abandonment of this cultivation by the small farmers, who found in the growth of maize less variable results for their labour. Present appearances point to a vigorous extension of this industry, and, although the results of last year's crop were but indifferent and much below the general average returns, it is expected that the season 1892–1893 will make up for this loss, the opinion of mill-owners being that they will this year crush the largest crop on record. Sugar-cane is generally cut in the second year of its growth, the fields being replanted after they have given crops for three or four seasons at most, and as the planting of cane has been conducted at irregular intervals it has chanced that seasons of large production have been followed by small crops in the immediately succeeding year. This will account for the alternately large and small areas of productive cane for many years, which the preceding table shows. From plantations in full bearing the weight of cane cut varies from 25 to 32 tons, while the price paid ranges from 11s. to 13s. per ton, in addition to the cost of cutting, so that the annual yield is from £7 10s. to £10 per acre planted.

Low price of sugar.

Principal centres of sugar-cane cultivation.

The Richmond electorate is now the principal centre of sugar-cane cultivation, and in 1891 there were 673 holdings, upon which areas, varying from 2 to 750 acres in extent, were devoted to this culture. The total area so planted was 13,549 acres, or over three-fifths of the whole area under cane in the Colony. The yield obtained from 5,133 acres of productive cane amounted to 121,329 tons, showing an average of 23·6 tons per acre.

Sugar on the Clarence.

On the Clarence River, in the electoral districts of Grafton and the Clarence, there were, in 1891, 472 holdings, on which cane was grown, the aggregate area under this crop being 8,496 acres. As in the Richmond River district, the majority of farmers cultivate sugar-cane in addition to other crops, and only a few estates are entirely devoted to its cultivation. Some planters have areas of from 25 to 100 acres in extent under cane, but their number is very limited. The yield in the Clarence and Grafton electorates was 62,126 tons, or an average of 18·1 tons per acre, cut on an area of 3,426 acres.

In the Macleay River district the area devoted to sugar-cane is now insignificant, only 196 acres having been returned in 1891 as under crop, of which 53 acres were productive.

Total crop of sugar.

The estates on which sugar-cane is grown number 1,168, and the whole crop of sugar-cane during the last season amounted to 185,258 tons, obtained from 8,623 acres, showing an average production of 21·5 tons per acre, which is 4·7 tons below the average of the former ten years. On the estates belonging to the Colonial Sugar-refining Company, the conduct of the business of the plantation has been entrusted to practical men, and no money spared to obtain the most approved and complete plant for the manufacture of sugar. This company's mills on the Richmond River are among the most complete in any part of the world, and the sugar manufactured is equal to the best Mauritius and West Indian samples. The quantity of sugar consumed during the past two years amounted to 97,925 tons, of which 44,862 tons were the product of the local plantations, the area cut in these years being 16,967 acres. The yield of sugar per ton of course varies with the density of the juice, but in ordinary seasons this may be set down at somewhat over 9 per cent.

VINES AND WINE PRODUCTION.

Markets for Australian wine.

In every part of the Colony, excepting the essentially sub-tropical portion, and the higher parts of the mountain ranges, grape vines thrive well, and bear large crops of succulent fruit, equal in size, appearance, and flavour, to the most renowned products of France, the Rhinelands, and Spain; yet the vine-growing and wine manufacturing industries are still in their infancy, although their prospects are as hopeful as could be desired. With a demand which the present production hardly satisfies, and the opening up of a market in England where New South Wales in common with other Australian wines, have obtained due appreciation, the future of vine-growing appears fairly assured. The depreciation which French and other foreign wines have suffered, both in quantity and in quality, owing to the scourge of the phylloxera, is an additional reason for the vine-growers of New South Wales looking forward to a successful future for their industry. How small the present production of Australia is compared with the total of the world will appear from the following table:—

Production of Wine in the principal wine-growing countries of the world.

Country.	Production in million gallons.	Country.	Production in million gallons.
Australia	3	Roumania	18
Austria	92	Russia..................	92
Algeria	72	Servia	53
Cape Colony	5	Spain	608
France	795	Switzerland	29
Greece	46	Turkey and Cyprus	69
Hungary..................	185	United States	32
Italy	798	Total	3,029
Portugal	132		

Vine planted in early days.

The vine was planted in the early days of the colonization of New South Wales, but it was not until the year 1828 that vine-growing and wine-making may be said to have been fairly established. In that year Mr. Busby returned from Europe with a large collection of cuttings from the most celebrated vineyards of France, Spain, the Rhine valley, and other parts of the continent of Europe, and planted, on his estate at Kirkton in the Hunter River district, a vineyard which has been the nursery of the principal vineyards of the Colony. Some years afterwards the vine was planted in the Murray valley, and in other districts, and was found to flourish so luxuriantly that the manufacture of wine received considerable attention. For a time, however, the prospects of this industry seemed very poor, and production diminished considerably, owing, partly, to the want of a market, and partly to the fact that the wine-makers, many of whom were not vignerons by training, possessed only a limited knowledge of the manufacture of wine, and produced at first an article of inferior and unsaleable quality. But in the principal vineyards of the Murray and the Hunter neither pains nor money was spared to introduce skilled labour and put up presses, vats, and other manufacturing appliances of the most approved pattern.

New South Wales wines at the Bordeaux Exhibition in 1882.

The results of this intelligent treatment became apparent, when prizes were awarded to the New South Wales wines at the Paris Exhibition of 1878, followed by an unbroken series of successes at the Exhibitions of Philadelphia, Sydney, Melbourne, and Amsterdam, and latterly at the Indian and Colonial Exhibition in London. But nowhere was the general excellence of the wines of New South Wales more fully recognized than at the Bordeaux Exhibition of 1882. There, in the principal centre of the wine trade of the world, the wines of New South Wales were classed by the most competent judges in the category of "Grands vins," and their value fully appreciated and established. The following statement shows the progress of the wine industry since 1863:—

Progress of vine-growing.

Area under Grape Vines and Production of Wine.

Year ended 31 March.	Total area under vines.	Area under vines for wine-making only.	Production.	Average per acre.	Year ended 31 March.	Total area under vines.	Area under vines for wine-making only.	Production.	Average per acre.
	Acres.	Acres.	Gallons.	Gallons.		Acres.	Acres.	Gallons.	Gallons.
1863	1,460	795	144,888	182·25.	1879	4,237	3,024	684,733	226·43
1864	1,641	880	136,976	155·65	1880	4,266	3,091	733,576	237·33
1865	1,849	945	161,299	170·69	1881	4,800	2,907	602,007	200·99
1866	2,126	1,243	168,123	135·25	1882	4,027	2,597	513,688	197·80
1867	2,281	1,358	242,183	178·33	1883	4,448	2,629	543,596	206·76
1868	2,532	1,483	285,283	192·37	1884	4,378	2,660	589,604	221·65
1869	3,117	1,917	412,587	215·22	1885	4,584	2,405	442,612	184·04
1870	3,907	2,039	460,321	225·75	1886	5,247	2,876	555,470	193·13
1871	4,504	2,371	342,674	144·53	1887	5,840	3,131	601,897	192·23
1872	4,152	2,466	413,321	167·61	1888	6,745	3,292	666,382	202·42
1873	4,090	2,568	451,450	175·80	1889	7,072	3,596	805,813	224·71
1874	4,547	3,183	578,985	181·90	1890	7,867	3,603	688,685	191·14
1875	4,308	3,077	684,258	222·37	1891	8,044	3,896	842,181	216·17
1876	4,459	3,163	831,749	262·96	1892	8,281	3,846	913,107	237·42
1877	4,457	3,217	799,709	248·59					
1878	4,183	3,027	708,431	234·04	Mean for 30 years				207·10

Increase of wine industry.

The above figures show that the wine industry has considerably increased during the thirty years under examination, the total area planted being now nearly six times what it was at the beginning of the period. The average yield per acre has also advanced; but this latter is probably due to the fact that in the earlier period the proportion of young vines not in full bearing was greater than is at present the case. The years 1876, 1877, 1880, and 1892 were the best of the series, the average production having in 1876 reached the large figure of 262·9 gallons per acre. The yield of wine last season was 33·1 per cent. above the average of the previous ten years. The total number of vine growers in 1891 was 2,134, and the average area of each vineyard, was 3·9 acres.

Number of growers.

The phylloxera vastatrix.

The "phylloxera vastatrix," which has caused some damage in the vineyards of the neighbouring colony of Victoria, necessitating stringent legislative measures, has also appeared in some vineyards of the Camden and Seven Hills districts, but, so far, without causing any great ravages. A commission was appointed some time ago to report on the appearance of the disease, and the best means of preventing its spread. The prohibition of the importation of vine-cuttings from abroad has been in force for some time, and the destruction of infested vineyards has been carried out under the direction of the Vine Diseases Board.

Cultivation of table grapes.

The industry is not restricted to the cultivation of fruit for wine-making purposes; on the contrary, a considerable area is devoted to the cultivation of table grapes, principally in the neighbourhood of Sydney, and in the districts of Ryde, Parramatta, and other portions of Central Cumberland. The area so cultivated in 1891 amounted to 2,148 acres, producing 3,694 tons of grapes, or at the rate of 1·7 tons of fruit per acre. There were also 2,287 acres of vines yet in an unproductive state.

ORANGE-GROWING.

First orangeries near Parramatta.

The cultivation of the orange and lemon has become one of the principal industries of the districts surrounding the metropolis. The first orange groves were planted near the town of Parramatta, and soon spread to the neighbouring districts of Ryde, Pennant Hills, Lane Cove, the whole of Central Cumberland, the Hawkesbury and Nepean valleys, and the mountain slopes of the Kurrajong district. The production of oranges has already attained such proportions that the growers are obliged to seek markets abroad for the disposal of their produce, as the demand, both in New South Wales and the adjacent colonies, is in some seasons exceeded by the supply. Efforts have been made of late to open up a market in England, as the fruit can be delivered in London at a time when the supply of oranges from Spain and other countries of the northern hemisphere has ceased.

State of orange growing in 1879.

The statistics relative to this branch of the agricultural industry are only available from the year 1879, when the area under oranges and lemons was 4,287 acres, which last year had increased to 11,370 acres, of which 8,745 were productive. The yield from that area amounted to 10,417,500 dozen oranges, or rather more than 1,191 dozen per acre. It is usually estimated that over 3,000 dozen per acre can be obtained in an average season from fair-sized trees in full bearing; it is therefore probable that the figures for 1891 included the return from a considerable number of young trees. The following shows the state of the industry in each year since 1879. The number of orangeries during 1891–92 was 1,940, the average size being nearly 6 acres.

Area of Orangeries.

Year ended 31 March.	Area of Orangeries.	Year ended 31 March.	Area of Orangeries.
	Acres.		Acres.
1879	4,287	1886	7,733
1880	5,106	1887	7,920
1881	5,939	1888	8,875
1882	6,301	1889	10,851
1883	6,716	1890	9,804
1884	7,268	1891	11,288
1885	6,911	1892	11,370

ORCHARDS AND GARDENS.

During the last ten years there has been very little alteration in the area under gardens and orchards. The cultivation of other varieties of fruit besides oranges and grapes appears to be retrogressing, instead of sharing in the progress observable in almost all other branches of agriculture. Yet the Colony consumes annually very large quantities of imported fruit, which could be successfully grown within its own limits. Leaving out of consideration the large importation of tropical fruit from Fiji, the South Sea Islands, and Queensland, some of which might be cultivated in the sub-tropical portion of New South Wales, the importation of other fruit is very considerable. Thus in 1891 Tasmania, South Australia, Victoria, New Zealand, and the United States supplied New South Wales with green fruit to the value of £107,613, while other green fruit, mostly the produce of Queensland, Fiji and sub-tropical countries, was imported to the amount of £85,604. The importation of dried and candied fruit,

Large quantity of fruit imported.

including dates, during the same period amounted to £128,271, and that of nuts to £12,321, while fruit boiled or in pulp was imported from Victoria and South Australia to the value of £2,000. New South Wales is therefore dependent on the outside world, to the extent of £335,809 for fruit, most of which could be advantageously produced within its own territory.

Number of orchards.

The number of orchards during 1891-92 was 7,568, and the area 24,030 acres, of which 16,606 acres were productive, and 7,424 were not yet in bearing.

Orangeries and orchards.

With regard to the figures representing the area of the orangeries and orchards, it should be understood that in many instances part of a holding is devoted to the growth of oranges and lemons, and part to the cultivation of other fruits, so that it is difficult sometimes to tell under which head the holding should be classed. It is believed that the area under oranges and lemons in 1890 was quite equal to that of the previous year, though the figures of 1889 and 1891 appear unduly large owing to the inclusion of areas which were in 1890 classed as orchards.

FAILURE OF CROPS.

Causes of failure.

During the agricultural year which may be reckoned as ending with April, 1892, there were 1,524 cases of failures of crops; of these, 565 were due to excessive rains occurring chiefly at sowing-time. Floods, more particularly affecting the maize crops, in the valleys of the coastal rivers, were the cause of 255 failures. Frost on the uplands, especially in Monaro, caused 94 failures. Cases of drought in the portion of the Central and Southern Divisions exposed to the hot blasts of the summer winds caused the loss of crops in 70 cases. Blight affected certain crops, chiefly maize, in 101 instances, the north coast district being most affected. The number of cases of rust reported for last season is but small, only 55 instances of loss having been recorded; the majority of cases occurred in the South-western Division, wheat being the crop most affected. In the coastal district, where wheat is grown in a very small way, 16 cases of rust were reported, which is a very high proportion. In 92 cases, of which 71 occurred on the Central table-land, the failures were caused by vermin. Locust swarms caused losses of crops in 29 cases, and hailstorms ruined the crops in 55 instances, principally in the Hunter River Valley. In the Riverina district, bush-fires entirely destroyed the wheat in 44 instances, out of 47 recorded for the whole country. In addition to the above instances of failures, losses of crops occurred in 161 other cases, the causes of which have not been specified, many, however, on the western slopes of the main range being due to the rabbits. In the following table the causes of failure, and the number coming under each, are shown for the last two years—no information having been obtained previous to 1891 :—

Causes of Failures.	No. of Instances.	
	1890-91.	1891-92.
Flood	957	255
Drought	38	70
Bush-fires	7	47
Rust	45	55
Locusts	113	29
Vermin	31	92
Hailstorms	14	55
Excessive rain	220	565
Blight	11	101
Frost	......	94
Flying-foxes	2	......
Not specified	151	161
Total	1,589	1,524

BEE-KEEPING INDUSTRY.

Bee-keeping. The industry of bee-keeping has acquired in New South Wales sufficient importance to deserve some notice. Hives are kept on a large number of farms, and there are also a certain number of apiarial establishments where the industry is solely carried on. These latter are mostly situated in the Blue Mountains, near the main line of railways, and in the districts surrounding the metropolis. The total number of hives reported in the Colony in 1892 was 39,728, their production having reached 894,583 lb. of honey and 33,786 lb. of wax. Of these, 6,144 hives, producing 133,571 lb. of honey and 5,189 lb. of wax, were kept in the Northern Division, the greater number being on the farms of the north coast, which produced 81,789 lb. of honey. In the Central Division there were kept 22,570 hives, producing 529,098 lb. of honey and 18,938 lb. of wax, the mountain districts and the environs of the metropolis, as mentioned above, having the major portion of this industry in their midst, and producing 336,404 lb. of honey out of the total just mentioned. In the Southern Division, 11,004 hives were returned, producing 231,514 lb. of honey and 9,659 lb. of wax. The value of this produce has lately suffered a decrease, but at the average price of 3d. per lb. of honey, the total return for the year would reach about £11,200.

Honey and wax.

AGRICULTURAL IMPLEMENTS.

Agricultural implements.

A census of agricultural machines and other implements used in farming and allied pursuits was taken in 1891; they were divided into three classes—agricultural, pastoral, and dairy implements—the value of which was then estimated at £2,722,996, that of pastoral implements alone being £218,741, the value of such articles as were used in purely agricultural operations, including dairy farming, being returned at £2,504,255, or about 58s. per acre cultivated, excluding permanent grass and fallow lands. Sheep-shearing machines are every year coming into more general use throughout the Colony, the total number of stands at work being reported in 1890 at 2,651; since then no information has been obtained on the subject. A valuation of the implements in use by pastoralists, farmers, and dairymen, was also attempted last year, but many occupiers failed to furnish information, and the figures obtained are therefore incomplete, in addition to which, implements, which were classified under the head of agriculture, have been valued as pastoral implements, and *vice versa*. The Census figures may, however, be considered as correct.

ENSILAGE.

Value of ensilage.

The value of ensilage for fodder is generally acknowledged, nevertheless this valuable means of preserving greenstuff is not as extensively practised as it should be in a country subject to frequent and sometimes disastrous droughts. From the following table it will be seen that there are at present in New South Wales 110 silos only, the greater number being found in the Southern Coast districts, where dairy-farming is one of the principal industries. The weight of ensilage fodder preserved last year was given as 5,101 tons, or 46·4 tons per silo:—

Division.	Number of Silos.	Tons of Ensilage made.
Northern Division.		
Coast	1	12
Table-land	4	160
Western Slopes	13	15
Totals, Northern Division	18	187
East Central Division.		
Coast	9	345
Metropolis and Environs	2	54
Table-land	19	360
Western Slopes	8	275
Totals, East Central Division	38	1,034
Southern Division.		
Coast	27	3,306
Table-land	12	190
Western Slopes	10	284
Totals, Southern Division	49	3,780
Western Division	5	100

IRRIGATION.

Irrigation.

Little has been done in New South Wales with regard to irrigation. Isolated efforts in that direction are generally reported as having met with success, but no general scheme of water conservation and distribution has yet been developed. Such an enterprise would be so vast, the area to be benefited is so great, and the interests to be served are so conflicting, that no private organisation could successfully cope with the subject, which must, therefore, be left to the care of the Government of the country. The Water Conservation Branch attached to the Department of Public Works is at present engaged in the work of obtaining sufficient hydrographical data to form the basis of a comprehensive scheme of irrigation, and the country is being traversed in all directions to ascertain the contour of its surface. From 1888 to 1891, the whole of the Riverina country was surveyed, and during 1891 and the early part of 1892 the Department extended its operations to the river Darling, from Wilcannia to Wentworth; the basin of the Gwydir, the country between the rivers Macquarie and Bogan, and that portion of central New South Wales through which the Willandra Billabong intermittently flows were examined, and officers are now engaged completing the hydrographical survey of the country lying between the Darling and the Paroo, from Bourke to the Queensland border.

Area irrigated.

The following table gives the area irrigated by private enterprise in each division of New South Wales, and the kind and number of implements and machinery in use for the purpose. The larger areas irrigated are situated in the Riverina district and the country watered by the Murray, Murrumbidgee, and the Lachlan rivers, where 22,666 acres are irrigated out of a total of 29,342 acres for the whole of New South Wales, throughout which irrigation operations necessitate the aggregate power of 239 pumps, 208 windmills, and 388 water-lifting implements :—

Electorate.	Area Irrigated.	Implements and Machinery.		
		Irrigation Pumps.	Water Lifters, Chain and Bucket.	Windmills.
Northern Division.	Acres.			
Coast	2,132	1	1	...
Table-land	198	2	3	2
Western Slopes	375	22	6	12
Totals, Northern Division ...	2,705	25	10	14
East Central Division.				
Coast	252	13	...	10
Metropolis and Environs	193	28	1	16
Table-land	1,128	23	66	15
Western Slopes	2,640	18	10	7
Totals, East Central Division.	4,213	82	77	48
Southern Division.				
Coast	115	10	83	24
Table-land	778	16	148	30
Western Slopes	20,026	42	7	36
Totals, Southern Division ...	20,919	68	238	90
Western Division.				
Western Slopes	1,505	64	63	56

PART XII.

Stock.

THE rapid settlement of the Colony has, in a great measure, been due to the fitness of its soil, vegetation, and climate, for the successful rearing of the principal species of stock which supply the wants of civilized men, and so largely contribute to the wealth of nations. For many years it was believed that a considerable part of Australia was quite unsuited for stock, and this opinion was fostered by the accounts of the earlier explorers, who reported that the interior of the continent was a vast desert. These apprehensions were soon dispelled, and the apparent difficulties offered to the successful rearing of stock disappeared before the energy of the colonists. One thing particularly favoured the settlers; though the number of native animals was very considerable, comprising chiefly marsupials of little commercial utility, there happily existed no large species of carnivora which could seriously interfere with the increase in the flocks.

Humble beginnings of stock breeding.

The beginnings of pastoral enterprise in the Colony were very humble. The whole stock of the community which accompanied Captain Phillip comprised only 1 bull, 4 cows, 1 calf, 1 stallion, 3 mares, 3 foals, 29 sheep, 12 pigs, and a few goats; and although the whole of the present flocks and herds of Australasia have not

Early importations.

sprung from these animals alone, it will be seen on how small a scale the business of stock-raising was first attempted. No systematic record of the arrival of stock seems to have been kept in the early days of settlement, but it appears that in the period between Governor Phillip's landing and the year 1800 there were some slight importations, chiefly of sheep from India. It is stated that at the close of the year 1792 the live stock of the Colony consisted of 23 horned cattle (old and young), 11 horses, 105 sheep (which were then quoted at £10 10s. each), and 43 hogs. In 1796 the live stock had largely increased, for the total then consisted of 57 horses, 101 cows and cow-calves, 74 bulls and bull-calves, 52 oxen, 1,531 sheep, 1,427 goats, and 1,869 hogs. In 1800 there were 203 horses, 1,044 cattle, 6,124 sheep, 2,182 goats, and 4,017 hogs. In 1796 a cow was worth £80, and a horse £90; a sheep of the Cape breed fetched £7 10s., and £5 was the price of a breeding sow. In 1803 the number of sheep in the Colony was set down at 10,157. In 1825, thirty-seven years after the establishment of the Colony, there were in New South Wales 6,142 horses, 134,519 cattle, 237,622 sheep, and 39,006 pigs. In 1842 there were 56,585 horses, 897,219 cattle, 4,804,946 sheep, and 46,086 pigs. As soon as the produce of stock began to exceed the demand for food, the increase in number became very rapid, and, at the end of the year 1850, the stock of the Colony numbered 13,059,324 sheep, 1,738,965 cattle, 132,437 horses, and 61,631 pigs.

Separation of Victoria.

The severance, in 1851, of Victoria, then the fairest province of the mother Colony, involved a loss of 6,589,923 sheep, 390,923 cattle, 20,086 horses, and 7,372 pigs; so that at the close of 1851 the flocks and herds of New South Wales were reduced to 7,396,895 sheep, 1,375,257 cattle, 116,397 horses, and 65,510 pigs. After the separation of Queensland the numbers of each kind of live stock within the existing boundaries of the Colony were 6,119,163 sheep, 2,408,586 cattle, 251,497 horses, and 180,662 pigs; in the following year the numbers showed a considerable decline, both from the

Separation of Queensland.

effects of the season, and from the large demand which arose for stock for the stations of the new Colony; and in 1861 the figures were, 5,615,054 sheep, 2,271,923 cattle, 233,220 horses, and 146,091 pigs. From the numbers just given, the sheep had, at the end of 1891, increased to 61,831,416, the cattle had declined to 2,046,347, the horses had increased to 459,755, and the pigs to 253,189.

SHEEP.

Land suited for pastoral pursuits.

The suitability of the land discovered in New South Wales for pastoral pursuits was undoubtedly the means of leading the infant Colony to take its first step on the path of commercial progress; and it is not a little surprising at this distance of time how steadily some of the settlers, in the face of the almost insurmountable difficulty of transport which existed a century ago, availed themselves of the opportunities at their disposal. The importation of valuable specimens of sheep from England or the Cape of Good Hope, prior to the introduction of steam, was at all times attended with great risk, and it frequently happened that many of these costly animals died during the tedious voyage. These enterprises were, however, on the whole successful, and thus the flocks and herds of the colonists surely, if at first slowly, increased and multiplied.

Captain Macarthur promotes wool-growing.

By the year 1795, Captain Macarthur, one of the first promoters of sheep-breeding in New South Wales, had accumulated a flock of 1,000, which were held in great estimation, and gradually increased in value, until, as recorded by an entry in his journal ten years later, the market price of a fat wether had risen to £5. Not satisfied with the natural increase of his flocks, Macarthur sought to improve the quality of his fleeces, by which means he could see opening before him the promise of great wealth, and the prospect of establishing important commercial relations with Great Britain.

With these ends in view, he procured from the Cape of Good Hope, at great cost and trouble, a number of superior rams and ewes. A happy circumstance occurred which favoured his enterprise; for he had the good fortune to secure possession of three rams and five ewes of very fine Spanish breed, which had been presented by the King of Spain to the Dutch Government. These animals, out of a total of twenty-nine purchased at the Cape, arrived in Sydney in 1797, and were disposed of to various breeders. With the exception of Macarthur, however, those who had secured sheep of the superior breed made no attempt to follow up the advantage, being probably amply satisfied with the larger gains from the sale of an increased number of animals. Macarthur, on the other hand, thought little of present profits, and still less of breeding entirely for human consumption. He attentively watched the results of crossing his imported rams with the old stock, and by systematically selecting the finer ewes which were the offspring, for further mingling with the sires, he gradually improved the strain, and in a few years obtained fleeces of very fine texture which met with the ready appreciation of English manufacturers. It has been asserted that Macarthur was not the first to introduce merino sheep into Australia; but whether this be so or not, there is no doubt that to him is due the credit of having been the first to prove that the production of fine wool could be made a profitable industry in this Colony.

Improvement of the flocks.

Prior to the present century the production of the finest wool had been confined chiefly to Spain, and woollen manufactures were necessarily carried on in England upon a somewhat limited scale, which was not likely to improve in face of certain restrictions the operatives endeavoured to place upon their employers. These men, in support of their contention that the woollen trade could not be expanded, on account of the limited supply of the raw material, argued that fine wool was obtainable only in Spain; and it was at this favourable period that Macarthur arrived in England with specimens of the wool obtained from his

Spain formerly chief wool-grower.

Trade opened up with Great Britain.

finest sheep, conclusively proving the capabilities of Australia as a wool-producing country. In this way he opened up a small trade with English manufacturers, which, as Australasian wool rose in public estimation, gradually increased until it reached its present enormous dimensions. During his visit to England, Macarthur purchased an additional stock of ten rams and ewes of the noted Spanish breed, nearly equal in quality to those which in 1797 he had procured from the Cape of Good Hope. That these animals were the finest obtainable in Europe may be gathered from the fact they also had formed portion of a present from the King of Spain to George III. Thus did Macarthur, after his return to New South Wales, patiently continue for many years the process of selection, with such success, that in 1858, when his flock was finally dispersed, it was estimated that his superior ewes numbered fully 1,000. Victoria secured a considerable portion of Macarthur's flock, and the process of breeding proceeded simultaneously in that and other adjacent Colonies.

Importation of sheep.

Although the increase in the numbers of the finer sheep was satisfactory, the importation of superior stock was not discontinued, and the stock of the Colonies was augmented in 1823 and 1825 by the further introduction of Spanish sheep. Sheep-breeding was about this period commenced in the Mudgee district, and the climate of that region has produced a still more favourable result upon the quality of the fleeces than any other part of the Colony, and it is thence that the finest merinos are now procured. As might have been anticipated, the climate of Australia has in some respects changed the character of the Spanish fleece. The wool has become softer and more elastic, and while having diminished in density it has increased in length, so that the weight of the fleece has only slightly altered. The quality of the wool has thus on the whole improved under the beneficial influence of the climate, and if no further enhancement in its value can be reasonably hoped for, there is at least every reason to believe that Australasian wool will maintain its present high standard of excellence.

Texture of wool.

Number of sheep in New South Wales.

The following table, showing the numbers at the close of each year since the separation of Queensland, illustrates the progress of sheep-breeding:—

Progress of Sheep-breeding.

Year.	Number.	Year.	Number.	Year.	Number.
1860	6,119,163	1871	16,278,697	1882	36,114,814
1861	5,615,054	1872	17,566,048	1883	37,915,510
1862	6,145,651	1873	18,990,595	1884	31,660,321
1863	7,790,969	1874	22,797,416	1885	37,820,906
1864	8,271,520	1875	25,353,924	1886	39,169,304
1865	8,132,511	1876	25,269,755	1887	46,965,152
1866	11,562,155	1877	21,521,662	1888	46,503,469
1867	13,909,574	1878	25,479,484	1889	50,106,768
1868	15,080,625	1879	30,062,910	1890	55,986,431
1869	14,989,923	1880	35,398,121	1891	61,831,416
1870	16,308,585	1881	36,591,946		

Annual increase.

The ratio of annual increase for the whole period is 7·8 per cent. Divided into three periods the ratios are—

1860–70 annual increase 10·3 per cent.
1870–80 ,, ,, 8·1 ,,
1880–91 ,, ,, 5·2 ,,

Natural law of increase.

The operation of the natural law regulating the increase of species, viz.—that the ratio of increase is inversely as the increase in the number of individuals—is observable in these figures, and the tendency of the rate of increase to decline as the numbers advance is clear enough.

Causes modifying rate of increase.

It is not possible to estimate the actual loss of sheep from drought and failure of grass, but an approximation can be made as to the number of stock in the Colony less than would have been the case had the seasons all been propitious. Thus the following table shows the expected increase of sheep after all causes of natural decrease are allowed for, the actual increase or decrease during each year, and the loss which may be attributable to the season. Under this last head are included not only the sheep which actually died, but also the expected increase from lambing which was not realized. Out of the eighteen years over which the information extends nine years only showed no loss, or loss so slight as to be inappreciable. On the other hand, five seasons of opposite character were experienced in which not only was there no increase, but an actual decrease, on the numbers of the previous year, ranging from 84,000 in 1876 to 6,255,000 in 1884. The loss on the year last named reached the enormous total of 8,138,000, a number larger even than the total of the flocks in some of the colonies of the group :—

Effect of bad seasons.

Loss of Sheep through Drought and kindred causes.

Year.	Expected increase, allowing for all causes of natural decrease.	Actual increase or decrease.	Loss through Seasons.
1874	3,807,000	3,807,000	†
1875	2,556,000	2,556,000	†
1876	1,915,000	* 84,000	1,999,000
1877	1,802,000	* 3,748,000	5,550,000
1878	3,958,000	3,958,000	†
1879	4,583,000	4,583,000	†
1880	5,335,000	5,335 000	†
1881	2,947,000	1,194,000	1,753,000
1882	1,797,000	* 477,000	2,274,000
1883	3,193,000	1,801,000	1,392,000
1884	1,883,000	* 6,255,000	8,138,000
1885	6,160,000	6,160,000	†
1886	3,409,000	1,348,000	2,061,000
1887	7,796,000	7,796,000	†
1888	2,435,000	* 462,000	2,897,000
1889	5,339,000	3,603,000	1,736,000
1890	5,880,000	5,880,000	†
1891	5,845,000	5,845,000	†

* Decrease during the year. † No loss, or, if any, very slight.

Requirements of other colonies check increase.

After allowing for the causes which naturally impede the increase of the flocks of the Colony, the demands of the slaughter-yard, the requirements of the neighbouring colonies, and the deaths occurring from other causes than drought, it will be found that the rate of increase in any year should be about 20 per cent., so that the flocks of the Colony would increase two-fold in about four years. Actual experience shows that such rate of increase was only approached once since the year 1861. During the period of five years from 1861 to 1866 there was a two-fold increase; the flocks of the Colony were again doubled in the eight years from 1866 to 1874 and in the thirteen years from 1874 to 1887. How many sheep could be sustained by the Colony under a system of artificial feeding and watering may hereafter become a question of national interest, but it is abundantly plain that even with a continuation of fair seasons it would be impossible, under the present mode of depasturing stock, for the Colony to support for any number of years an increase of sheep similar to the record of even 1891, as in six years' time the flocks would number 120,000,000, a total nearly as large as that now found in all Australasia.

Export and import of sheep.

The export and import of sheep during the ten years, 1882–1891, is shown in the following table :—

Year.	Exported.	Imported.	Year.	Exported.	Imported.
1882	856,190	207,538	1887	1,218,504	864,313
1883	1,006,227	205,558	1888	2,327,406	254,018
1884	1,942,204	404,371	1889	1,217,325	832,565
1885	1,237,155	1,134,439	1890	2,987,902	598,077
1886	1,247,514	288,225	1891	1,615,964	663,044

Local demand formerly small.

The local demand for sheep for consumption was, until recent years, so small compared with the supply as not to appreciably affect the increase of the flocks of the Colony. Such, however, is not now the case, and the annual demand for slaughtering purposes is about 6 per cent. of the number of sheep depastured, and is, therefore, equal to three-sevenths of the annual cast.

Stock-carrying capacity of Colony.

The stock-carrying capabilities of the Colony are very difficult to estimate, as by far the greater portion of the country is yet in its natural state. Improvements, such as a better system of water conservation and irrigation, an intelligent extension of the salt-bush, cotton-bush, and other drought-resisting shrubs and natural grasses, and the cultivation of artificial fodder, are gradually being effected, and will indefinitely extend the capacity of the Colony for supporting stock of all descriptions.

Number of sheep in each colony.

The following table gives the number of sheep in the Australasian colonies at the end of 1891, and the proportion owned by each colony :—

Colony.	No. of Sheep.	Proportion of each Colony to total Australasia.
New South Wales	61,831,416	49·7
Victoria	12,928,148	10·4
Queensland	20,289,633	16·3
South Australia	7,646,239	6·1
Western Australia	1,962,212	1·6
Tasmania	1,664,118	1·3
New Zealand	18,128,186	14·6
Australasia	124,449,952	100·00

Colony stands first as sheep-breeder.

It will be seen that New South Wales stands first of all the colonies as a sheep-breeding country, both as regards the number of its flocks, and the number of sheep depastured per unit of area. But whilst Victoria has nearly reached the limit of its natural capabilities in this particular direction, a considerable proportion of its area being now devoted to agriculture, New South Wales has not yet approached these limits. In Queensland, as in South Australia, sheep-breeding does not absorb the attention of pastoralists to the same extent that it does in New South Wales. The former colony is more adapted to the breeding of cattle; whilst in the southern and more settled districts of South Australia greater attention is paid to the cultivation of cereals, its northern territory, like that of Queensland, being more adapted by nature to the breeding of cattle and horses. Western Australia is at present in the early stage of its colonisation; much of its area is still unknown, and it is therefore impossible to estimate its future as a sheep-breeding country. It may, however, be surmised that the southern portion of its immense territory will, in time to come, be stocked with sheep, whilst the northern portion will probably be found more suitable for the breeding of cattle and horses, on

Certain colonies adapted for cattle.

account of its resemblance to portions of Queensland and the northern territory of South Australia situated under the same latitude. It was thought at one time that cattle-breeding would occupy a position in New South Wales equal to that of sheep-breeding, but experience has shown that the general climatic conditions are more favourable to sheep than to cattle, and the Colony is probably destined to remain, as it now is, the great sheep-breeding centre of Australia.

Country not all fitted for sheep

The different degrees of success attending sheep farming in different parts of the country has long since directed attention to the fact that each part of Australia is not equally fitted for the production of fine wools. New South Wales may be divided climatically into four zones:—(1) The coast country extending from the seaboard to the main range, the breadth of which varies from 20 to 100 miles; (2) the table-land districts on the summit of the range; (3) the upper part of the western slopes; and (4) the interior, or "salt-bush country."

Seaboard not suited to merino.

The climate of the eastern seaboard for a considerable distance inland is too moist, and a large portion of it too poor, for the adequate sustenance of merinos, but it is probable that the coarser breeds of sheep would not deteriorate through the limited food supply and the rugged nature of the country. On the Hunter and other northern rivers, and in the southern coast districts, where the soil is very rich, dairy-farming and agriculture are the leading, and, no doubt, the most profitable, industries. Sheep-breeding is carried on to some extent in the regions towards the summit of the coast range; but, as in the case of the country near the sea, the soil as a rule is unfavourable to sheep. On crossing the coast range, however, the contrast between the aspect of the country just entered, and that left behind, is very striking. Here the grazing and wool-growing capabilities are at once apparent, and further to the westward a still greater improvement is visible.

Riverine Country.

In the abundant pastures of the Riverine districts the wool is less fine than in the country immediately west of the table-lands, but the fleeces are generally sound and heavy. Further in the salt-bush country the wool suffers both in the weight of the fleece and in its quality; but the country is fattening, and the stock are generally more healthy than those nearer the sea. In the country on the further side of the Darling the great summer heat is adverse to the production of heavy fleeces; but even here a fair class of wool is produced, as the stock-owners are constantly introducing fresh blood, and so counteracting the tendency towards the degeneration of the breed of sheep which might otherwise ensue.

Importation of stud sheep.

The importation of stud sheep from foreign countries, notably France, Germany, and America, which was continued for many years after the superfine quality of Australian wool had been established in the markets of the world, practically ceased even before importation was legally prohibited; for it had become apparent that the fleece, instead of showing signs of deterioration under the influence of the climate, had, on the whole, a tendency to improve. The introduction of sheep and cattle into New South Wales was forbidden for many years, owing entirely to the fear of the stock-owners that their herds would be contaminated by scab and other diseases prevalent in European flocks; but these restrictions were removed at the beginning of the year 1888, and 432 pure bred sheep, comprising 354 American merino, 60 German merino, and 18 English stud sheep arrived in 1891, in addition to 14,026 stud sheep from other parts of Australasia.

Superiority of Australian wool

It is now generally admitted that as far as the fleece is concerned the Australian merino has little to gain by any further admixture of European or American blood, but it is equally admitted that there is room for improvement in the physique of the animal. To produce a larger carcase, without interfering with the quality of the fleece, many experiments have been made, but without much success, and it has been found that the crossing of noted breeds of English rams with Australian ewes has invariably resulted, after a generation or two, in a deterioration of the merino. The breeding of sheep for consumption, and for the sake of the wool, has, therefore, developed naturally into two distinct fields of industry. It may here be mentioned that the carcass of the ordinary Australian merino when dressed averages about 46½ lb., whereas dressed carcases of the Lincoln or Leicester breed would average 57 to 60 lb.

Breeds of sheep.

The various breeds of sheep in the Colony are the Merino, Lincoln, Leicester, Downs, and Romney Marsh, and crosses of the long-woolled breeds, principally with the merino. At the close of 1891 the respective numbers of merino and long-woolled sheep and cross-breeds, stood thus :—

Merino	60,252,458
Long-woolled sheep	641,152
Cross-breeds	937,806
Total	61,831,416

Subdivided as per following table :—

MERINO.

Combing.

Sheep.	Rams.	Ewes.	Wethers.	Lambs.	Total.	
			Superfine.			
Pure and stud	73,740	780,708	321,043	363,900	1,539,391	
Ordinary	93,176	2,375,570	1,908,490	1,560,633	5,937,869	
						7,477,260
			Medium.			
Pure and stud	99,395	1,559,561	623,629	918,806	3,201,391	
Ordinary	203,293	7,787,651	4,039,412	4,326,613	16,356,969	
						19,558,360
			Strong.			
Pure and stud	63,614	1,296,538	895,023	754,089	3,009,264	
Ordinary	124,422	5,410,700	4,096,764	3,042,397	12,674,283	
						15,683,547
Total, *Combing*						42.719,167
			Clothing.			
			Superfine.			
Pure and stud	21,903	327,615	260,700	197,809	808,027	
Ordinary	40,657	840,075	760,659	467,181	2,108,572	
						2,916,599
			Medium.			
Pure and stud	42,269	533,338	337,118	323,736	1,236,461	
Ordinary	88,306	3,731,145	2,117,184	1,743,093	7,679,728	
						8,916,189
			Strong.			
Pure and stud	34,900	925,000	605,406	528,119	2,093,425	
Ordinary	45,563	1,585,805	1,083,908	891,802	3,607,078	
						5,700,503
Total, *Clothing*						17,533,291
Total number of MERINO SHEEP......						60,252,458

LONG-WOOLLED SHEEP.

Sheep.	Rams.	Ewes.	Wethers.	Lambs.	Total.	
			Lincoln.			
Pure and stud	8,982	48,838	38,505	32,513	128,838	
Ordinary	10,397	101,018	76,298	57,755	245,468	
	Total				....	374,306
			Leicester.			
Pure and stud	7,247	31,114	26,106	17,572	82,039	
Ordinary	7,291	48,590	51,100	31,754	138,735	
	Total				....	220,774
			Downs.			
Pure and stud	933	6,052	5,128	4,220	16,313	
Ordinary	880	10,324	8,591	6,946	26,741	
	Total				....	43,054
			Romney Marsh.			
Pure and stud	197	351	......	390	938	
Ordinary	507	1,053	......	520	2,080	
	Total				....	3,018
	Total number, LONG-WOOLLED SHEEP					641,152
	CROSSES—Long-woolled with Merino principally.					
Crosses.........	7,876	293,811	409,498	226,621	937,806	937,806
			Grand total............................			61,831,416

The sexes and classes of sheep at the end of 1891 were estimated as follows :—

Rams	975,548
Ewes	27,694,837
Wethers	17,664,562
Lambs	15,496,469
	61,831,416

No necessity for housing stock.

The climate of New South Wales admits of stock of all kinds being left in the open air, and there is no necessity for housing them during the winter months. The sheep are either kept in paddocks or under the care of shepherds, though on some stations they are both shepherded and paddocked. During 1891 there were :—

Paddocked	60,127,284
Shepherded	917,321
Paddocked and shepherded	786,811
	61,831,416

Paddocking system.

The advantages of the paddocking system are now universally recognized; the country will carry one-third more sheep; the wool will be longer and sounder, and the fleece as a whole one-third better; the feed will be cleaner and less liable to grass-seed; the lambing on the average of years will be better; the sheep will increase in size, they will live longer and continue longer profitable; they will be freer from foot-rot and other diseases; the expense of working the station will be less than a quarter of what it would be if the sheep were shepherded; and finally, the owner will be able to devote the principal part of his time to improving his sheep, instead of spending it in attempting to manage a number of shepherds and hut-keepers.

Percentage of lambing.

The following table shows the percentage of lambing under both systems for the last seventeen years :—

Year.	Paddocked.	Shepherded.	Year.	Paddocked.	Shepherded.
1875	73	68	1884	55	51
1876	61	54	1885	79	64
1877	56	50	1886	66	62
1878	83	74	1887	78	69
1879	78	72	1888	55	40
1880	81	72	1889	64	54
1881	63	49	1890	71	65
1882	59	51	1891	69	63
1883	64	57			

Lambs marked.

The number of ewes at the close of 1890 was 25,373,440; but allowing for deaths from natural causes, slaughtering, and export, the number at the time of lambing was probably not more than 23,343,000. A percentage of 69, as estimated by the Chief Inspector of Stock, would give a total of 16,107,000 lambs, while the number marked, as shown by the Live Stock returns, was 14,690,026. When due allowance is made for deaths between the time of lambing and of marking, it will be found that the estimate of the Chief Inspector is very accurate.

WOOL.

New South Wales wool exported.

The quantity of wool exported, the produce of New South Wales, during 1870 and subsequent periods ending with 1891, is given in the subjoined table. A large proportion of the clip is exported to Europe *via* the adjacent colonies as already alluded to in the chapter on Commerce. During 1870 nearly 46 per cent. of New South Wales wool was shipped from ports outside the Colony, but in 1891 the proportion had declined to about 28 per cent. The weights given are on the assumption that all the wool was shipped in grease:—

Quantity of New South Wales Wool Exported.

Year.	N.S. Wales ports.	Victorian ports.	S. Australian ports.	Queensland ports.	Total.
	℔.	℔.	℔.	℔.	℔.
1870	34,608,600	20,411,889	8,787,126	....	63,807,615
1875	48,635,622	55,305,262	9,184,725	150,000	113,275,609
1880	99,011,710	63,367,669	11,298,297	404,598	174,082,274
1885	132,539,441	45,311,695	8,215,265	387,986	186,454,387
1886	122,901,992	48,597,092	22,923,412	297,037	194,719,533
1887	159,704,606	58,687,888	21,718,339	112,762	240,223,595
1888	188,990,931	59,155,698	8,121,721	28,839	256,297,189
1889	183,881,857	74,857,400	25,372,201	126,804	284,238,262
1890	168,836,103	70,808,013	17,475,612	55,104	257,174,832
1891	255,204,601	81,689,892	19,731,728	470,733	357,096,954

The proportion of the total clip reaching New South Wales ports compared with what was despatched by way of Melbourne, Adelaide, and Brisbane was :—

Year.	Percentage shipped from New South Wales ports.	Percentage shipped from other Colonial ports.
1870	54·2	45·8
1875	42·9	57·1
1880	56·9	43·1
1885	71·1	28·9
1886	63·1	36·9
1887	66·5	33·5
1888	73·7	26·3
1889	64·7	35·3
1890	65·6	34·4
1881	71·5	28·5

As the season for exporting wool does not wholly fall within the calendar year, the quantities of wool stated in the foregoing table for any year refer partly to that year, and partly to the previous one. The following table shows the total number of sheep shorn, and distinguishes those whose fleece was washed previous to shearing. It will be observed that there has been a marked tendency to shear in grease, owing no doubt to the fact that freights are now much lower than formerly. Besides, the price obtained for washed wool in excess of greasy is not commensurate with the cost of washing :—

Tendency to shear in grease

Number of Sheep shorn.

	Sheep.				Lambs.	
Year.	In Grease.	H.-W. and Spout.	Creek-washed.	Scoured.	In Grease.	Washed.
1880	25,298,211	1,015,556	6,164,859	2,660,141	Not recorded.	
1881	29,485,675	398,800	2,415,714	739,592	3,129,995	155,939
1882	29,505,143	273,600	1,780,984	323,900	3,814,788	102,300
1883	30,075,145	317,375	2,156,874	149,468	4,833,437	83,241
1884	24,110,459	306,908	801,408	307,950	3,010,459	80,990
1885	28,324,595	38,000	642,424	267,250	4,113,383	42,584
1886	29,446,157	36,645	494,544	965,874	5,535,350	62,100
1887	31,082,201	90,000	647,945	554,687	8,135,458	123,745
1888	35,426,832	………	416,779	875,280	6,053,509	23,756
1889	36,553,856	80,000	475,254	1,446,105	6,790,889	74,693
1890	40,935,736	………	1,271,712	580,794	9,285,871	33,521
1891	45,619,967	………	426,201	1,093,886	10,531,106	31,542

Weight of fleece.

The average weight of fleece obtained since 1880 is given in the table herewith. The heavy fleece realized in late years from hot water and spout-washed sheep arose probably from the circumstance that the sheep so treated were few in number, and of a finer class than ordinary :—

Average Weight of Fleeces.

	Sheep.						Lambs.			
Year.	In Grease.		Creek-washed.		Scoured.		In Grease.		Washed.	
	lb.	oz.	lb.	oz.	lb.	oz.	lb.	oz.	lb.	oz.
1880	5	7	3	3¾	2	9½	Not recorded.			
1881	5	0	2	12½	2	8½	2	1	1	8 1/16
1882	5	0	2	14	2	9½	1	14½	1	4½
1883	5	2	3	0	2	12	1	14	1	6
1884	5	0	2	15	2	14	1	13	1	6
1885	5	7½	3	2	3	0	1	12	1	8
1886	5	5⅓	3	0¼	2	14	1	9¼	1	3½
1887	5	9	3	1½	2	14	1	12½	1	5
1888	5	6½	3	1⅓	2	9½	1	11	1	7
1889	5	13½	3	3	2	14	1	11½	1	9
1890	5	11¾	3	2	3	4½	1	14¼	1	7½
1891	5	9	2	14½	3	7	1	15	1	4½

Weight and size of bales.

Wool is put up at the stations in packs which weigh from 10 lb. to 12 lb. each. The bales are usually 4 ft. 6 in. or 5 ft. 3 in. in length, and 2 ft. 2 in. in breadth and depth, and weigh when packed about 450 lb. Before being shipped they are, however, "dumped" in a hydraulic press, and thus reduced to less than half their original length.

VALUE OF THE WOOL CLIP.

Wool the most important export.

The wool clip of Australasia is its most important item of production, and it may be said that the prosperity of the colonies in a large measure depends upon the state of the wool market.

The following table summarises the state of the export trade of New South Wales wool during the period 1860–1891, and illustrates the growth of that important industry during thirty-two years ; whilst, at the same time, the fluctuations in the value of the clip may be easily followed. The weights given represent the actual exports, washed and greasy wool being taken together :—

New South Wales Wool Exported.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	lb.	£		lb.	£
1860	14,962,362	1,454,289	1876	100,736,330	5,565,173
1861	18,171,209	1,768,978	1877	102,150,246	5,256,038
1862	20,988,393	1,801,186	1878	111,833,017	5,723,316
1863	15,842,520	1,316,520	1879	123,710,450	6,491,198
1864	25,827,917	2,294,615	1880	154,871,832	8,040,625
1865	29,858,791	2,283,560	1881	139,601,506	7,149,787
1866	36,980,685	2,830,348	1882	146,221,182	7,433,091
1867	27,327,452	2,125,737	1883	188,161,710	9,598,761
1868	27,067,256	1,960,360	1884	173,986,303	8,953,100
1869	51,269,672	3,162,522	1885	168,151,659	7,246,642
1870	47,440,610	2,741,141	1886	173,985,640	7,028,596
1871	65,611,953	4,748,160	1887	216,450,342	8,911,155
1872	50,233,453	3,342,900	1888	235,848,944	9,089,776
1873	62,998,692	3,936,408	1889	261,853,484	10,620,636
1874	75,156,924	5,010,125	1890	236,322,828	8,991,396
1875	87,534,280	5,651,643	1891	331,887,720	11,036,018

Effect of price of wool on national prosperity.

An examination of the preceding figures at once shows how greatly the fluctuations in the value of the staple article of export affect the national prosperity. The exports for the years 1884 and 1886, for instance, which may be taken as practically equal in quantity, represented a value of £8,953,100 in the former year, whilst in the latter year the value was reduced to £7,028,596. Again, comparing 1883 with 1891, there was a difference in quantity in favour of the latter year of 123,355,000 lb. of wool weighed in the grease, and had the prices of 1883 been obtained the value of the 1891 clip would have exceeded that of the former year by £5,401,134, whereas the excess was only £1,437,257. The general strike of 1890, so frequently alluded to in these pages, had a very marked effect on the wool trade of the succeeding year. In some cases during 1890 the sheep remained unshorn until long after the usual time, and in many others the wool did not leave the stations until the close of the year, so that a considerable portion of the wool clip of 1890 was of necessity held over for export in the succeeding year.

Fluctuation in value.

The preceding table also shows that, although during the period under examination the value of wool has greatly fluctuated from one year to another, the tendency to a settled diminution of price is unfortunately too clearly discernible. In order to further illustrate the fluctuations in the value of this staple in the London market during the last twelve years, the following table will give an accurate idea of the average value realised for greasy wool. The values given were those ruling at the five principal sales of each year, and have been altered for 1890 and previous years since last publication.

Average Value per lb. of New South Wales Greasy Merino Wool in the London Market.

Sales.	1880.	1881.	1882.	1883.	1884.	1885.
	d.	d.	d.	d.	d.	d.
1st Series	12½	10½	10½	10	9½	9
2nd ,, ...	14½	11	10½	10	9½	8½
3rd ,, ...	12	11	10	9	9½	8
4th ,, ...	12	10½	10	9½	10	7
5th ,, ...	12	10½	10	10	9½	7½

Sales.	1886.	1887.	1888.	1889.	1890.	1891.
	d.	d.	d.	d.	d.	d.
1st Series	7½	10½	8	9	10½	9
2nd ,, ...	6	10	8	9½	10	10
3rd ,, ...	8	9	8	10	9	9½
4th ,, ...	11	8¼	8½	10½	10	9
5th ,, ...	10	7½	8¾	11¼	9	8½

During the period covered by the foregoing table, Sydney-shipped greasy wool realised from 14½d. to 6d. The maximum

Maximum price obtained in 1880.

prices were realised during 1880, when the sales opened at 12½d. per lb. Prices were fairly well maintained till 1883, but they began to decline rapidly until the lowest market was reached in the second series of 1886, when greasy wool realised as little as 6d. per. lb., but at the end of that year the prices had considerably advanced, greasy wool selling at 10d. These prices have been exceeded only once since, which was at the December sales of 1889, when the price obtained for greasy was 11½d. Since 1889 the price of greasy wool ranged from 10½d. at the beginning of that year, to 8½d. at the fifth series of 1891. The first sales of 1892 opened at the last mentioned price, but after that period a continual decline took place, till in June greasy wool was only bringing 8d., almost the same rate as that which obtained in the unfavourable season of 1886. The average price per bale for the last seven years was £14, while the price obtained during the last half of 1891 was only £12 5s. The unsatisfactory state of the markets is principally attributed to the general financial depression, exclusive tariffs, and increased production.

Prospects of the wool industry.

The state of the wool market may improve as the adverse circumstances pass away, but a return to the extremely prosperous years of 1871 to 1875, or even those of 1880 and 1882 is very doubtful. But even with the present markets there is no cause to view unfavourably the further extension of the production of wool in these colonies. In the ancient seats of wool growing, production is now stationary, and in some of the areas recently devoted to this industry, many causes, both climatic and otherwise, are likely to offer serious checks to its extension, while population and the consequent demand for wool is everywhere increasing. Nevertheless, it seems certain that unless fresh avenues are open to the wool industry in those countries where its use is comparatively unknown, it would be hopeless to expect a marked rise in the value of the article. The establishment of a market for Australian wool among the teeming populations of China and Japan, where the nature of the climate itself points out the value

China and Japan as a market for wool.

of wool as an article of clothing, is an object towards which the intelligent glance of the statesmen of Australia might well be directed.

Combing and clothing wool.

It is a moot question as to whether the climate of New South Wales is more adapted to the production of a combing than a clothing wool. Although the former is looked upon with most favour by wool growers, it is generally recognised that there are very large tracts of country, especially where the salt-bush predominates, on which it is difficult to raise a good combing wool, and where it will probably be found more profitable by wool growers to give greater attention to the cultivation of the clothing variety.

Coarse-woolled sheep.

The breeding of coarse-woolled sheep, for the metropolitan market, is confined chiefly to the districts along the coast. The stock raised for this purpose are principally of the Leicester and Lincoln breeds, the latter being perhaps the greater favourite as a producer of fat lambs. There is no doubt but that, cultivated solely as an article of food, the coarse-woolled sheep is quite as profitable as the merino.

Wool clip of Australasia.

The quantity and value of wool, the produce of each of the various colonies of Australasia, exported during the year 1891, will be found hereunder:—

Colony.	Quantity—Wool in Grease.	Value.
	lb.	£
New South Wales	357,096,954	11,036,018
Victoria	79,777,765	3,792,938
Queensland	89,069,524	3,453,548
South Australia	49,724,664	1,538,764
Western Australia	8,783,073	329,365
Tasmania	9,378,173	418,460
New Zealand	116,562,756	4,129,686
Total	710,392,909	24,698,779

Value of clip.

The estimated value of the wool grown in each colony may appear anomalous, when the weight of the clip only is considered; it must be borne in mind, however, in comparing the weight and value of this staple, that there is a wide margin of difference in the average value of the wool grown in one colony and that grown in another.

Consumption of wool.

The quantity of wool consumed by the manufacturing nations of the world amounted in 1889 to 2,040,000,000 lb. weighed in the grease. Of this quantity 913,000,000 lb., or less than half, was grown in the various countries engaged in manufacturing, and of the balance 605,000,000 lb., or about 53·7 per cent., was Australasian. The consumption of wool was thus distributed:—

	Home production.	Imports.	Total consumption.
	lb.	lb.	lb.
United Kingdom	133,000,000	337,000,000	470,000,000
Continental Europe	450,000,000	660,000,000	1,110,000,000
North America	330,000,000	130,000,000	460,000,000
Total	913,000,000	1,127,000.000	2,040,000,000

Principal wool consuming countries.

During recent years a considerable change has taken place in the markets available for the shipment of wool; the United Kingdom is no longer the first amongst wool-manufacturing countries, though its consumption of imported wool is still equal to 30 per cent. of the total wool imported. The relative positions of the United Kingdom, America, and continental Europe as wool consumers during several years may be gleaned from the following table :—

Year.	United Kingdom.	Continental Europe.	North America.	Grand Total.
	lb.	lb.	lb.	lb.
1880	370,000,000	882,000,000	381,000,000	1,633,000,000
1881	320,000,000	952,000,000	355,000,000	1,627,000,000
1882	357,000,000	969,000,000	385,000,000	1,711,000,000
1883	340,000,000	969,000,000	418,000,000	1,727,000,000
1884	381,000,000	1,017,000,000	422,000,000	1,820,000,000
1885	365,000,000	1,021,000,000	444,000,000	1,830,000,000
1886	418,000,000	1,033,000,000	460,000,000	1,911,000,000
1887	392,000,000	1,030,000,000	450,000,000	1,872,000,000
1888	434,000,000	1,056,000,000	460,000,000	1,950,000,000
1889	470,000,000	1,110,000,000	460,000,000	2,040,000,000

Wool-producing countries

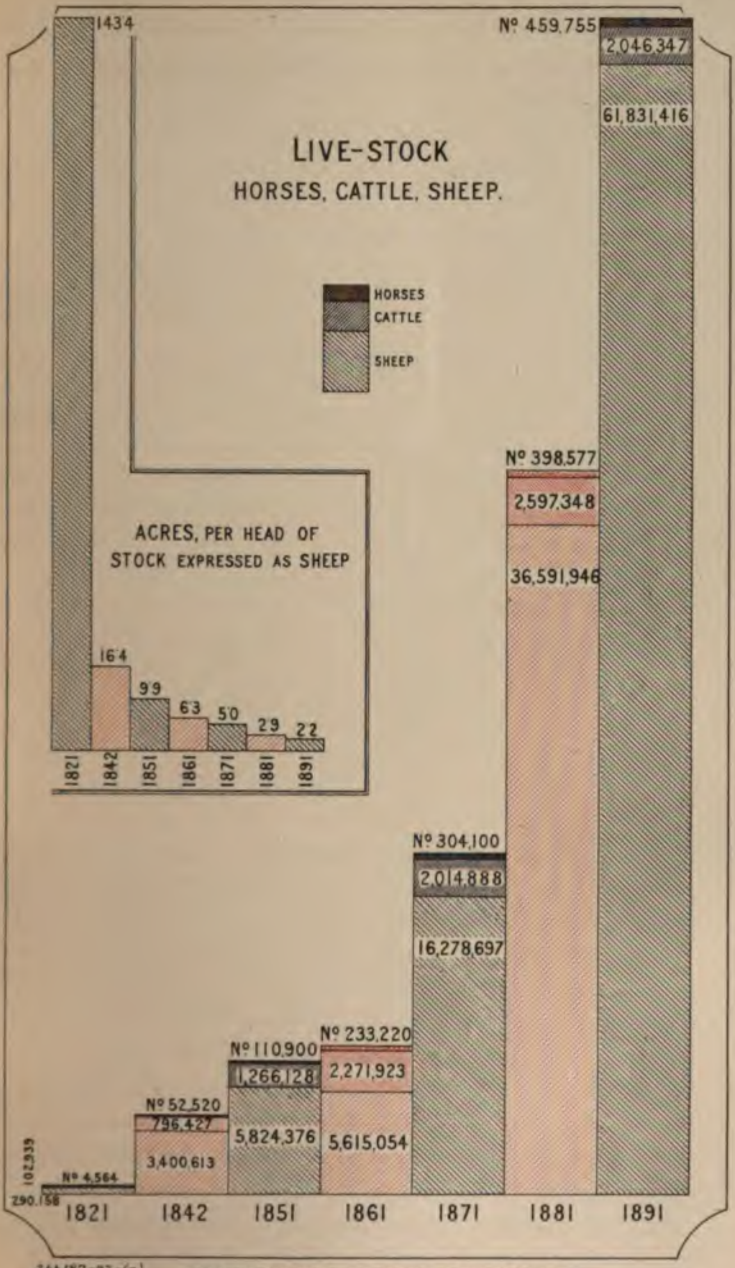
An exact estimate of the produce of the various countries of the world cannot be given, but sufficient information is obtainable from which the relative importance of the different producing areas may be determined for the year 1889–90.

Producing areas.	Sheep.
Europe	214,499,000
Asia	71,669,000
Africa	60,820,000
America	143,581,000
Australasia (1891)	124,450,000
Total	615,019,000

CATTLE.

Cattle breeding.

Though still a most important industry, cattle-rearing does not now occupy so prominent a place as formerly. In 1861 the value of the horned cattle depastured in the Colony was about £7,000,000, while that of the sheep was not more than half this sum. In 1891 the relative positions of the two classes of stock had entirely



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SYDNEY, NEW SOUTH WALES.

anged ; for, while the horned cattle inclusive of dairy cows were lued at £11,940,400, the sheep were worth £20,868,000, notthstanding that in the interval cattle had considerably risen value, and sheep had depreciated. The number of horned ttle returned at the end of each year since 1861 is shown in the bjoined table, and it will be noticed how great was the decline the totals since 1875 down to 1885, though the numbers have adily increased since then :—

Decrease in number of cattle.

Horned Cattle.

Year.	Number.	Year.	Number.
1861	2,271,923	1877	2,746,385
1862	2,620,383	1878	2,771,583
1863	2,032,522	1879	2,914,210
1864	1,924,119	1880	2,580,040
1865	1,961,905	1881	2,597,348
1866	1,771,809	1882	1,859,985
1867	1,728,427	1883	1,640,753
1868	1,761,411	1884	1,425,130
1869	1,795,904	1885	1,317,315
1870	2,195,096	1886	1,367,844
1871	2,014,888	1887	1,575,487
1872	2,287,660	1888	1,622,907
1873	2,794,327	1889	1,741,592
1874	2,856,699	1890	1,909,009
1875	3,134,086	1891	2,046,347
1876	3,131,013		

If the above figures be compared with the returns of sheep for same period, it will be found that the change which has taken ce in the class of stock has been most remarkable. It is very batable whether the substitution of sheep for cattle will in the l prove advantageous to the State, though there does not appear be any doubt that sheep-breeding is at present more profitable the individual owner. The increase in the number of cattle pastured in the Colony during 1891 was 137,338 ; but since 75 there has been a decrease of 1,087,739. It would seem m these figures that the lowest point in cattle-raising was ched in 1885, the result, no doubt, of continued bad seasons. ce then the improvement has been gradual, and even if small

Substitution of sheep for cattle.

it may be taken as evidence of the disposition of the pastoralists in some parts of the Colony to revert to cattle breeding in place of sheep.

Loss from failure of water and grass.

An exact statement of the loss of cattle from disease and failure of water and grass can only be made for nine years, and of these years three showed an actual decrease on the figures of the previous year, the years 1887, 1889, and 1891 being the only ones of the series which could be considered favourable to stock. Estimating at the low figure of £5 a head, the loss in 1883 was equal to £1,670,500, and in 1884 to £1,398,500. For the four years 1886 to 1889 stockholders enjoyed comparative immunity, but in the season of 1890 the losses were again considerable. In this instance, however, the deaths were attributable, not to failure of grass and water, but to disease possibly induced by the prevalence of the opposite condition of too much rain. The following statement shows the increase in the numbers of cattle which would have occurred had the seasons been favourable, and also the increase or decrease actually experienced :—

Loss of Horned Cattle through Disease, Drought, and kindred causes.

Year.	Expected Increase, allowing for all causes of natural decrease.	Actual Increase or Decrease.	Loss through Seasons.
	No.	No.	No.
1883	114,900	*219,200	334,100
1884	64,100	*215,600	279,700
1885	30,600	*107,800	138,400
1886	66,800	50,500	16,300
1887	207,600	207,600	†
1888	82,600	47,400	35,200
1889	118,700	118,700	†
1890	299,500	167,400	132,100
1891	137,300	137,300	†

* Decrease during the year. † No loss ; or, if any, very slight.

Principal breeds of cattle in Colony.

The principal breeds of cattle now in the Colony are the Durham or Shorthorns, Hereford, Devon, Ayrshire, Alderney, and crosses from these various breeds. At the close of the year 1891 the numbers of each breed, as far as could be ascertained, were :—

Shorthorns—Pure and stud	55,826	
Ordinary	687,119	
		742,945
Hereford—Pure and stud	31,531	
Ordinary	217,567	
		249,098
Devon—Pure and stud	12,984	
Ordinary	70,530	
		83,514
Black-polled—Pure and stud	1,350	
Ordinary	820	
		2,170
Ayrshire—Pure and stud	4,419	
Ordinary	10,773	
		15,192
Others—Pure and stud	1,987	
Ordinary	7,562	
		9,549
Crosses—First	8,194	
Ordinary	935,685	
		943,879

The cross-breeds were estimated as follows :—

Shorthorn and Hereford	318,374
Shorthorn and Devon	116,786
Hereford and Devon	54,193
Shorthorn and black-polled	11,381
Ayrshire, and shorthorn	25,234
Black-polled and Devon	79
Unrecognizable	417,832
	943,879

Increase in dairy cattle.

There is a comparatively large increase in the number of milking cattle, as many of the stockowners, principally in the coastal districts, are turning their attention to dairying instead of fattening for market, and it is believed this change will continue and in time become general throughout the Colony, as dairying when properly carried out yields very satisfactory returns.

"Cast" of cattle.

The number of fat cattle which will be available for market during the year 1892 is estimated to be about 334,303 head. This number is certainly very high, if the produce of the herds of the Colony be alone considered. The cattle trade with Queensland is, however, very considerable, especially in store cattle sent to this Colony for fattening; these serve to swell the nominal cast of the herds of the Colony to the figures given above. If the produce of the Colony alone be reckoned, the cast for the year 1891 was about 238,000 fat cattle, and the cast for 1892 will probably be 255,000 head.

Breed of cattle improving.

The breed of cattle throughout the Colony is steadily improving, a result due to the introduction of good stud stock, as well as the care exercised in selection. Cattle are for the most part kept in paddocks, and of the total number in the Colony 1,613,337 are paddocked, 275,140 are in open runs, and the remainder, 157,870, are depastured both ways.

Pure bred cattle imported.

During the year 1891, 414 pure bred cattle, 238 bulls and 176 cows, were imported, chiefly from the other colonies of the group. Importations from Europe and America were prohibited for many years, owing to the natural dread of the stock owners lest their herds should contract diseases which have devastated the cattle of other countries. The prohibition was removed in 1888, and cattle are now admitted after strict quarantine.

The number of breeding cows in 1891 was estimated at 636,300, of which 343,477 were dairy cows. The calves branded were returned at 407,417, equal to 64 per cent. of the breeding cows. As the season was not unfavourable, at least 80 per cent. of calves would have been a reasonable expectation. It is therefore plain that in a large number of instances the calves have reached the age when they are usually branded. This was probably the case with about half the calves dropped by what are termed dairy cows.

HORSES.

Horse-breeding.

Australasia is eminently fitted for the breeding of most descriptions of horses, and attention has long been directed to this industry.

t an early period the stock of colonial bred horses was enriched y the importation of some excellent thoroughbred Arabians from ndia; and the high name which was acquired by the horses of ustralia was largely due to this cause. The abundance of good asture everywhere obtainable also contributed to this result. The ative kangaroo-grass, especially when in seed, is full of saccharine atter, and young stock thrive excellently upon it. This abundance f natural provender allowed a large increase in the stock of the ettlers, which would have been a great advantage, had it not been hat the general cheapness of horses led to a neglect of the canons of reeding. In consequence of the discovery of gold, horses became ery high priced. Under ordinary conditions this circumstance ould have been favourable to the breed of horses, and such as the case in Victoria. In this Colony it was far otherwise. he best of the stock of New South Wales, including a large roportion of the most valuable breeding mares, was taken by ictoria, with the result that for twenty years after the gold rush he horses of the Colony greatly deteriorated. One class of stock nly escaped. The thoroughbred racer was probably improved oth by the importation of fresh stock from England, and by the udicious selection of mares. The period of deterioration ended bout the year 1870, since which year there has been a percep-ible improvement in all classes of horses. The number of horses n New South Wales shows little increase for the last seventeen ears, as may be seen from the table following :—

Excellence of native grasses.

Partial deterioration of stock.

Horses.

Year.	Number.	Year.	Number.
1875	357,696	1884	337,172
1876	366,703	1885	344,697
1877	328,150	1886	361,663
1878	336,468	1887	390,609
1879	360,038	1888	411,368
1880	395,984	1889	430,777
1881	398,577	1890	444,163
1882	328,026	1891	459,755
1883	326,964		

Small annual increase of horses.

The annual increase in the number of horses has been not more than 1·58 per cent. during the whole period covered by the above table, while the increase of population has been at the rate of 4·18 per cent.

Classification of horses.

For purposes of classification the horses of the Colony have been divided into draught, light-harness, and saddle-horses, the numbers of each particular kind being as follows :—

Class.	Thoroughbred.	Ordinary.	Total.
Draught	20,463	122,984	143,447
Light-harness	16,375	103,617	119,992
Saddle	28,172	168,144	196,316
Total..............	65,010	394,745	459,755

Saddle and harness horses.

Endurance of Australian horses.

The Colony is specially adapted for the breeding of saddle and light-harness horses, and it is doubtful whether these particular breeds of Australian horses are anywhere surpassed. The bush horse is hardy and swift, and capable of making very long and rapid journeys, when fed only on the ordinary herbage of the country ; and in times of drought, when the grass and water have become scanty, these animals often perform astonishing feats of endurance. Generally speaking, the breed of horses is improving, owing to the introduction of superior stud horses and the breeding from good mares. Where there has been a deterioration in the stock, this has been due to breeding from weedy mares for racing purposes and from the effect of the drought.

Horses for market in 1892.

The approximate number of animals fit for market during the present year will be :—

Draught-horses	23,960
Saddle ,, ...	36,910
Light-harness horses......	25,730
Total....	86,600

India and China markets.

Of these it is estimated that 22,535 are suitable for the Indian and China markets. The total number leaving the Colony for markets outside Australia during 1891 was only 1,884. The demand for horses in India is considerable, and Australia is a natural market from which supplies may be derived. Hitherto, the headquarters of this trade have been at Melbourne, but of the shipments thence fully 80 per cent. of the horses have been brought from New South Wales. Recently, however, the Victorian Government has placed a tax of 50s. per head on all horses entering their Colony, the effect of which will probably be that the horses will henceforth be shipped for India from New South Wales ports. Already, a vessel has sailed from Newcastle to Bombay, having on board 550 horses as part of her cargo. The speculation of sending horses to India is one open to many risks, as, apart from the dangers of the voyage, there is always an uncertainty as to the stock being accepted. Owing, therefore, to the limited demand, it has not been found advantageous to breed horses to any great extent except for local requirements.

Wild horses.

The number of wild horses in the Colony during the year is estimated at 3,800, a decrease of 700 on the number in the previous year.

PASTORAL PROPERTY.

Value of pastoral property.

Pastoral property and stock form the largest factor in the wealth, not only of New South Wales, but also of all the other principal colonies of Australasia, and the return derived therefrom is the largest source of the income of its inhabitants. The total capital value of pastoral property in the Colony, including land, improvements, and plant, as well as stock, was estimated at the beginning of 1892 to be £152,068,000, of which £72,629,000 represent the value of land, £44,437,000 of improvements and plant, and £35,002,000 of stock. Of the latter, sheep represented a value of £20,868,000; horned cattle, exclusive of dairy cows, £9,536,000; and horses, £4,598,000. The value of the production from sheep for the year may be reckoned at £12,363,000; from cattle, £1,535,000; and horses, £827,000, or £14,725,000 in all. This total does not include the return from dairy cattle, estimated at £1,684,000, full particulars respecting which will be found at page 382, *et seq.*

Value of improvements on Crown lands.

In the above returns is included the value of improvements on Crown lands under lease to the pastoralists, which for the year under review was estimated to be £7,528,000. The capital value of the land is of course excluded from the general estimate.

Total Live Stock in Australasia.

The number of stock in each colony at the close of the year 1891 was as follows:—

Colony.	Sheep.	Cattle.	Horses.
	No.	No.	No.
New South Wales	61,831,416	2,046,347	459,755
Victoria	12,928,148	1,812,104	440,696
Queensland	20,289,633	6,192,759	399,364
South Australia	7,646,239	399,077	188,587
Western Australia	1,962,212	133,690	40,812
Tasmania	1,664,118	167,788	31,312
New Zealand	18,128,186	831,831	211,040
Total	124,449,952	11,583,596	1,771,566

Stock runs.

The number of sheep and cattle runs in the Colony during the year 1891 was 41,600, of which 36,146 were enclosed, and 5,454 were open or unenclosed; 20,330 of the enclosed runs were properly subdivided into paddocks, and 12,144 were only partially subdivided. The area comprised in these holdings was approximately 173,037,500 acres, about 40,907,500 acres being freehold, and 132,130,000 acres leased from the State. The improvements effected on pastoral estates for fencing and for watering stock have been valued by the Chief Inspector of Stock at £80,428,968. Of this sum fencing absorbs £70,608,999, representing 1,689,549 miles at an average rate of £41 16s. per mile. The dams for watering stock number 31,933, which, at an average value of

Dams and fencing.

£82 11s. 6d., give a total value of £2,636,897. There were 32,784 excavated tanks, worth on an average £192 19s., or, in all, £6,325,096, while the number of wells sunk or bored number 3,744, the average value of each well being £229 3s., and the total of all wells being £857,976. These figures represent the first cost, the present value of all improvements being £44,437,000.

Public Watering Places.

Public watering places are established on all the main stock routes of the Colony, the construction and maintenance of which are vested in the Department of Mines and Agriculture. These works consist of dams, wells, and artesian bores, and at the present time 135 tanks, 15 dams or reservoirs, 35 wells, and 12 artesian bores are in existence. The tanks vary in size up to 5,000,000 gallons, and in depth from 15 to 20 feet. They are so constructed as to be fed during rainy weather by surface drains. The soil from the excavations is embanked around, to shelter the tanks from the wind, and so lessen the evaporation, and also, where the contour is favourable, to conserve water above the ground surface. The total storage capacity of the tanks and wells abovementioned may be set down at 450,000,000, and the wells, if regularly worked, will yield a total of 400,000 gallons per day. Except at those dams and reservoirs which are of large extent and capacity, stock are not allowed direct access to the tanks, but are admitted to troughs which are filled by means of service reservoirs, into which the water is raised by various methods—steam, horse, or wind-power, as the case may be. There have been erected 54 steam pumps, 93 pumps worked by horse-power, and 1 windmill, the remainder being open watering places, supplied by hand-power. From the wells the water is mostly drawn by whims and self-acting buckets. In addition to the above sources of supply there were 10 Government artesian bores on the stock routes in the north-western corner of the Colony, the daily yield from these was approximately 3,000,000 gallons.

Storage capacity.

The World's flocks.

The latest figures which have come to hand respecting the flocks and herds of the principal countries, refer to various years from

1882 to 1891, and are given herewith. The important part which these colonies are destined to play in the wool markets of the world will be better understood when the character of the wool produced in Australia is made an item of comparison, as well as the actual number of sheep depastured :—

	Cattle.	Horses.	Sheep.	Swine.
Europe	104,166,000	34,865,000	214,499,000	46,152,000
Asia	70,850,000	4,443,000	71,669,000	417,000
Africa	8,203,000	721,000	60,820,000	840,000
America	117,249,000	21,920,000	143,581,000	53,974,000
Australasia	11,584,000	1,772,000	124,450,000	1,153,000
Total	312,052,000	63,721,000	615,019,000	102,536,000

Pastoral resources of New South Wales in terms of sheep.

In order to give a more definite idea of the development of the pastoral resources of New South Wales, the following table has been compiled, showing in different periods, from 1860, the amount of stock that has been actually depastured in the Colony. For the sake of convenience the numbers of cattle and horses are expressed in terms of sheep; that is, allowance has been made at the rate of ten sheep for each head of large stock, so that the total shows what would have been the result had the cattle and horses been replaced by their equivalent of sheep. There is also shown the number of acres of land in the Colony to each sheep of the totals thus found, as well as the number of such sheep per head of the population :—

Year.	Sheep.	Other Stock expressed in terms of sheep.	Total.	Acres per sheep.	Sheep per head of population.
1860	6,119,163	26,600,830	32,719,993	5·99	93·87
1865	8,132,511	22,444,920	30,577,431	6·40	74·73
1870	16,308,585	25,326,930	41,635,515	4·70	83·49
1875	25,353,924	34,917,820	60,271,744	3·35	101·42
1880	35,398,121	29,760,240	65,158,361	3·00	87·83
1885	37,820,906	16,620,120	54,441,026	3·60	57·44
1890	55,986,431	23,531,720	79,518,151	2·46	78·72
1891	61,831,416	25,061,020	86,892,736	2·25	75·98

DISEASES IN STOCK.

Diseases in sheep.

On the whole the stock of the Colony was tolerably free from disease during 1891, especially as regards sheep and horses. Scab in sheep has been unknown in this Colony for some considerable time, and indeed the whole of Australasia is at present exempt from this malady, with the exception of Western Australia, where it exists to a very slight extent. New Zealand is believed to be now free from this disease, but has not been officially declared to be so. The importation of sheep from both Western Australia and New Zealand into New South Wales is still prohibited. There are sixty-three sheep districts in New South Wales, and foot-rot has been noticed in thirty-seven districts, attributed to wet seasons, running on low rich pasture, and contagion. In twenty-three districts the sheep were affected with fluke, through depasturing on low swampy ground, unsound country, and rank pasture. The sheep in thirty-four districts, to the extent of about 16 per cent., were reported to have been infested with worms, attributed by the Stock Inspectors to the frequent summer rains following on a wet winter, which lessened the nutrition in the pasture and lowered the stamina of the sheep, while at the same time the moisture and heat tended to a large development and increase of the worms. The scarcity of the natural saline grasses has doubtless also contributed to no slight extent to the spread of this disease.

Disease in horses.

The year was unusually free from epizootic diseases in horses. Anthrax was reported in one district, and Australian stringhalt had appeared in one district, a disease considered by the Government Veterinary Surgeon to be due to the presence of intestinal parasites. Prurigo continued to give trouble in five districts. In seventeen districts horses were attacked with strangles, but only in a mild form. At the end of the year 1890 a rather severe outbreak of influenza, vulgarly known as "pink-eye," took place, causing a good many losses; this disease prevailed until the spring of 1891, and was reported from seven districts. Glanders and farcy were discovered among circus horses which arrived from America in November, 1891, and six had to be destroyed. The remainder were detained in quarantine for the period required by law, after which they were re-shipped to America. The number of horses lost through accident was reported as 2,342, and a number of deaths also occurred from eating Chinese melon.

Diseases in cattle.

With regard to cattle, pleuro-pneumonia was reported from thirty-one districts, or 213 runs, while in thirty-two districts the cattle were reported as free from that disease. In twenty-four of the infected districts the presence of the disease was attributed to the introduction of cattle from Queensland, and contact with travelling stock from that colony; and in the remaining districts where the disease occurred the cause was unknown. Inoculation had proved successful in thirty-one districts, and stock-owners generally are largely in favour of compulsory inoculation. The "Diseased Animals and Meat Act," which has recently come into operation, is a most important one, intended to prevent in a great measure the sale of animals affected with tuberculosis and kindred diseases. During 1891, the number of animals condemned at Homebush as suffering from these diseases, was 303. Two cases of actinomycosis were reported on by the Government Veterinarian. Cumberland disease was reported to have killed 102 head, in three districts, during the year, being 491 less than in the previous year. Symptomatic Anthrax, or "Blackleg," had carried off 1,073 head, in eight districts, being an increase of 720. Cattle to the number of 3,638 in twenty-six districts are reported to have died from cancer and tubercular swellings in the throat, and 99 deaths in five districts are reported from ophthalmia. No disease whatever was reported amongst pigs.

NOXIOUS ANIMALS.

Rabbit pest.

The only large carnivorous animal in Australia at all dangerous to stock is the dingo, or native dog; but animals which consume the pasturage, such as kangaroos, wallabies, hares, and rabbits, are equally deemed noxious by the settlers. The rabbits are the greatest pest. At one period over 100 million acres were infested with them, and 25,280,000 were destroyed in one year, and their skins paid for by the Government. So serious had the evil become in 1883 that a special Act was passed to deal with the trouble, and raise funds for the purpose by assessment on the stock in the infested country. An amended Act was passed in 1890, under which no subsidies are allowed, nor are assessments made towards defraying the cost of destruction. It is estimated that over a million has been spent in the destruction of rabbits, a portion of which was expended on wire fencing, which is considered the only effective method of dealing with the plague. One line of fencing extends from Narramine, on the Macquarie River, to Bourke, on the Darling River, a distance of 207 miles; thence to Barringun, a further length of 84 miles, at an average cost of £82 per mile. It is proposed to extend this fence from Narramine, along the western railway line to Blayney, thence to Murrumburrah and along the southern line to Corowa, the fences enclosing the railway being used to support the wire-netting. Tenders have been accepted for this work. Another fence has been constructed from the Murray northward, along the western boundary of the Colony, a distance of nearly 346 miles. The cost of this line was £26,135, or an average of £75 12s. 9d. per mile. The wire-netting used was 17 gauge, 1¼ inch mesh, and 42 inches in width. Besides these 633 miles of fencing erected by the Government, there has been a large amount of rabbit-proof fencing put up by individual pastoralists to protect their runs amounting, as far as can be ascertained, to no less than 15,000 to 16,000 miles. The expenditure on account of rabbit destruction up to the end of 1891 amounted to £858,039, of which £344,823 was derived from assessment, while £513,216 came out of the general revenue. The amount expended in 1891 from assessment was in payment of outstanding accounts. The expenditure from General Revenue does not include £880 paid as salaries to officers in Rabbit Department.

Wire fencing.

Cost of rabbit destruction.

Extirpation of noxious animals.

For the destruction of noxious animals other than rabbits, the amount of assessment paid by stock-owners in 1891 was £31,664, and the Government subsidy was £7,520; the amount actually expended was £46,795. The number of kangaroos destroyed during the year was 271,172; of wallabies, 704,671; wallaroos, 839; kangaroo rats, 130,881; wombats, 75; bandicoots, 997; paddamellons, 19,008; wild pigs, 20,262; hares, 649,131; native dogs, 11,530; opossums, 13,310; eagle-hawks, 3,502; crows, 21,929; emus, 871. The loss of stock from native dogs is reported to have been 85,408 sheep, valued at £28,189; while the loss from tame dogs is returned at 45,824 sheep, valued at £16,118.

Rewards paid.

The reward paid for scalps of noxious animals differs greatly, according to the locality, and is determined by the various Boards. The prices paid were as follows:—For kangaroos, from 1d. to 1s.; wallaroos, 4d.; wallabies, from 2d. to 6d.; paddamellons, from 2d. to 6d.; hares, from 2d. to 9d.; kangaroo rats, 2d. to 6d.; bandicoots, 3d.; native dogs, from 10s. to 60s.; pups, 2s. 6d. to 10s.; opossums, 1d.; wild pigs, 9d. and 1s.; eagle-hawks, 6s. to 7s. 6d.; emus, 3d. to 6d.; crows, 1d. to 6d.

DAIRY FARMING.

Dairy farming a promising industry.

Dairy farming has made progress of late years, and there is every prospect of its developing into a most important industry. The introduction of the factory system in convenient centres, the great improvements effected in appliances used in dairies, together with the establishment of direct railway communication with Sydney have done much towards developing this industry. Dairy farming is not now, as formerly, wholly confined to the farmers, as many of the graziers in a large way of business, especially in the costal districts, have lately turned their attention to the industry, and are likely to find it profitable. The breadth of land devoted to green food and permanent artificially sown grasses has been largely extended during the last few years, so that in March, 1892, the area thus sown was over 365,000 acres. The greater part of this land is devoted to the depasturing of dairy cattle and as the area is still below the present requirements, an extension of this form of cultivation may be anticipated. At the beginning of 1892 the number of dairy cows was returned as 343,477, distributed amongst the various electorates as follows:—

Number of Dairy Cows.

Metropolitan District	6,416
Albury	1,222
Argyle	12,738
Balranald	2,525
Bogan	6,529
Boorowa	2,010
Bourke	2,762
Braidwood	4,525
Camden	25,456
Carcoar	5,192
Clarence	2,150
Central Cumberland	4,519
Durham	5,861
Eden	34,348
Forbes	3,562
Glen Innes	4,374
Gloucester	3,652
Goulburn	230
Grafton	5,801
Grenfell	4,032
Gundagai	4,030
Gunnedah	3,257
Gwydir	4,862
Hartley	3,037
Hastings and Manning	6,664
Hawkesbury	2,526
Hume	4,970
Hunter	4,951
Hunter, Upper	7,815
Illawarra	9,052
Inverell	2,723
Kiama	17,215
Macleay	5,695
Macquarie, East	2,583
Macquarie, West	2,954
Maitland, East	1,479
Maitland, West	285
Molong	3,706
Monaro	7,617
Morpeth	2,434
Mudgee	6,299
Murray	2,591
Murrumbidgee	7,634
Namoi	2,928
Nepean	3,240
Newcastle	617
New England	6,791
Northumberland	1,714
Orange	2,608
Parramatta	303
Patrick's Plains	7,792
Queanbeyan	4,310
Richmond	14,942
Shoalhaven	18,940
Sturt	822
Tamworth	4,842
Tenterfield	2,990
Tumut	3,359
Wellington	2,842
Wentworth	498
Wilcannia	397
Wollombi	2,892
Yass Plains	3,917
Young	4,450
	343,477

Constant attention to the peculiarities of the climate, and the wants of the colonists, as well as the judicious crossing of strains, have developed a breed of cows peculiar to Australia. This is especially the case in the coast districts immediately south of Sydney, though all well-known breeds of milkers are found in

Yield of milk.

New South Wales. The milk yielded by the dairy cows of the Colony may be set down at about 123,652,000 gallons, of which the quantity consumed in making butter and cheese during the past year was about 63,000,000 gallons; the weight of the butter made was 18,362,897 lb.; the weight of cheese, 5,506,071 lb. The yield of milk per cow is a very variable quantity. In some of the principal dairy centres as much as 500 gallons is returned as the yearly average, while in other districts the yield falls far short of this. For the whole Colony the average may be set down at 2 gallons per day for every cow milked, which, allowing for dry cows, is equal to about 360 gallons a year. The cost of maintaining a cow may be reckoned at £2 5s. per annum.

Factory butter.

The quantity of milk required to make a given weight of butter varies considerably according to whether the milk is treated by a separator or in the old fashion. A great proportion of the butter now made is what is usually termed factory or separator-made, and the average quantity of milk used per lb. of butter produced is 2·6 gallons, or 26 lb. 2 oz. For ordinary hand-made butter the quantity required is about 3 gallons, thus showing a saving of about 13 per cent. by the former method, in addition to the extra value of the butter, the price during 1891 being from 2d. to 3d. per lb. higher in the Sydney markets for the factory-made than for the ordinary kind. No statistics respecting the manufacture of butter and cheese were collected prior to 1887, when the quantity made was 16,106,000 lb. and 5,780,000 lb. respectively. The number of hands employed at dairy farming in 1891 was approximately 10,000; of these 887 were employed in the various factories. These latter numbered some 270, employing steam equal to 1,061 horse-power, the plant used being valued at £62,100. The principal factories are situated in the Shoalhaven, Camden, Kiama, Eden, and Richmond districts. The produce of the factories in 1891 was 7,661,197 lb. of butter, and 3,722,264 lb. of cheese.

Hands employed.

Produce of factories.

The following are the districts in which the largest quantities of butter and cheese are made :—

Produce of Butter and Cheese.

Electorate.	Butter.	Electorate.	Cheese.
	lb.		lb.
Shoalhaven	2,838,696	Eden	4,830,529
Camden	2,678,489	Monaro	138,975
Kiama	2,212,060	Richmond	125,721
Eden	2,143,034	Argyle	45,406
Richmond	1,133,995	Camden	36,322
Argyle	588,481	Glen Innes	31,860
Illawarra	476,375	Patrick's Plains	20,689
Hunter	434,454	Hunter	17,932
Mudgee	402,864	Macquarie East	16,960
Patrick's Plains	281,760	Grafton	14,110
Other Electorates	5,172,689	Other Electorates	227,567
Total	18,362,897	Total	5,506,071

Imports and exports.

The following table shows the imports and exports of butter and cheese for the last ten years :—

Year.	Butter.		Cheese.	
	Imported.	Exported.	Imported.	Exported.
	lb.	lb.	lb.	lb.
1881	660,128	762,397	171,544	145,833
1882	1,654,016	437,856	331,944	163,378
1883	1,813,504	778,635	161,753	259,742
1884	2,791,936	621,264	725,177	247,337
1885	3,624,992	521,473	769,148	123,585
1886	3,129,392	286,944	1,229,334	85,815
1887	1,034,544	1,041,152	318,099	247,826
1888	2,258,704	764,960	691,148	300,375
1889	1,904,737	662,489	955,494	300,750
1890	838,703	1,120,044	212,801	288,902
1891	1,410,508	572,212	260,428	109,965

A large portion of the imports shown above was for the western districts of the Colony, where dairy-farming naturally has not been attempted, owing to the prevailing climatic conditions. The import into Sydney was but 13,100 lb. in excess of the export, so that the metropolitan market may be said to be in the hands of the local farmers.

Value of the dairy industry.

The value of the dairy industry to the Colony, excluding that of swine-breeding, is estimated at £2,386,900 for the year 1891. The value of milk not made into butter was £980,370, of butter £612,100, and of cheese £91,800. The return from poultry is estimated at £682,730. The dairy cattle of the Colony were valued at £2,404,300.

SWINE.

Swine-breeding neglected.

The breeding of swine, which is usually carried on in conjunction with dairy-farming, has been very much neglected in New South Wales, so that in 1891 the number of stock was 55,016 less than in 1880. Considering the importance which the industry has attained in other countries, it is a matter of surprise that more attention has not been paid to it in this Colony, where the conditions of farming in many parts, more especially in the coast districts, offer great facilities for the raising of this class of stock. The estimated value of swine in the Colony at the close of 1891 was £569,700, and the estimated return therefrom for the year was about £348,687. The following table shows the number of pigs in New South Wales for 1860 and subsequent periods :—

Year.	Number of swine.	Year.	Number of swine.
1860	180,662	1884	211,656
1865	146,901	1885	208,697
1870	243,066	1886	209,576
1875	199,950	1887	264,111
1880	308,205	1888	248,583
1881	213,916	1889	238,585
1882	154,815	1890	283,061
1883	189,050	1891	253,189

Swine slaughtered.

The number of swine slaughtered during 1891 was 126,497, of which 54,412 were killed at the Metropolitan abattoirs, and the quantity of bacon and hams made was 6,009,600 lb., chiefly in the south coast district; it is probable, however, that a large number of swine is slaughtered for bacon-curing, concerning which returns were not collected. The value of the productions from swine for the year was £348,700. The following is a statement of the quantity of bacon and ham made in the various districts:—

Bacon and ham.

Electorate.	Bacon and Hams.
	lb.
Durham	233,815
Camden	345,460
Eden	729,434
New England	180,322
Hume	136,545
Kiama	632,760
Yass Plains	135,691
Patrick's Plains	133,628
Shoalhaven	793,920
Other districts	2,688,025
Total	6,009,600

The number of swine in each of the Australasian Colonies at the close of 1891 was as follows:—

Number of swine.

Colony.	Number of Swine.
New South Wales	253,189
Victoria	286,780
Queensland	122,672
South Australia	83,797
Western Australia	25,930
Tasmania	73,520
New Zealand	308,812
Australasia	1,154,700

It will thus be seen that New Zealand has a larger number than any other Colony, its total being 308,812 or 27 per cent. of the whole herds; Victoria ranked second with 286,780 or 25 per cent., and New South Wales was the next in order with 253,189 or 22 per cent.

SLAUGHTERING.

Slaughtering for food.

Slaughtering for food is permitted only in places licensed for the purpose, but such establishments are very numerous. In the metropolitan district there are 25, and in the country districts 1,592 slaughter-yards, employing respectively 363 and 3,791 men; in all, 1,617 establishments, and 4,154 men.

Consumption of meat.

The consumption of meat cannot be given accurately for the metropolitan and country districts separately, as several of the largest country slaughter-yards are carried on for the purpose of supplying the metropolitan market. For the Colony generally it is estimated that the average annual consumption of mutton per inhabitant is 104·8 ℔., of beef 176·8 ℔., and of pork 9·4 ℔., making a total consumption of 291 ℔. Allowance has been made in these figures for exports, and for meat consumed on stations.

Stock slaughtered.

The following table shows the quantity of stock of each kind killed for food in 1891:—

Stock.	Number slaughtered in 1891.		
	Metropolitan.	Country.	Total.
Sheep	807,424	1,597,529	2,404,953
Lambs	74,718	52,991	127,709
Bullocks	62,610	148,121	210,731
Cows	11,917	54,474	66,391
Calves	15,806	10,007	25,813
Pigs	54,412	72,085	126,497

To the quantity of sheep enumerated above must be added about 647,300 killed on stations, making the total number of sheep slaughtered 3,052,253. The mutton exported in various forms equalled about 827,300 sheep, so that the actual local consumption was 2,224,953.

Price of fat stock.

The value of stock slaughtered can be determined with exactness only for the metropolitan market. Taking all stock sent to the Homebush saleyards, at Sydney, during 1891, for the purpose of slaughter, the price of sheep averaged 7s. to 13s. for wethers, and 5s. 6d. to 10s. for ewes. For bullocks the average price was £7 5s. per head, and for cows about £2 10s. less. At the Abattoirs mutton sold at an average of 1½d. per lb., the skin being worth 2s. 3d., the fat 5½d., and the heads 1½d. each. Beef brought about 1½d. per lb., the heads and feet being worth from 1s. 6d. per set, fat 4s. per beast, the hide 12s. 6d., and offal 3s. per head. Veal averaged 1¾d. per ℔., the skin being worth 2s. 6d. Lambs brought 5s. each, and pork sold for 4d. per ℔., the fat realizing about 3d. per carcase.

SURPLUS STOCK.

Disposal of surplus stock.

If the pasture resources of New South Wales expanded at a ratio at all approaching that of the increase of live stock, the inability of the Colony to dispose of its surplus would not be a matter of material concern, for though all classes of sheep decrease in value after a certain age, the value of their wool, except in special and exceptional circumstances, is more than equal to the value of the grass they would consume. It unfortunately happens that under the present conditions of pasturage the number of sheep in the Colony is even now too great to be properly maintained, so that the disposal of the surplus is a question of great and increasing seriousness.

Cast of stock.

By "cast" is meant the number at such age when it would be more profitable to send them for slaughter than keep them, in the case of ewes for breeding, or further growth, in the case of non-breeders. The cast, expressed as a percentage of the whole of the sheep depastured, is a variable quantity, which, however, may be taken as 13½ per cent., so that for the present year the cast will not be less than 8,250,000. Against this there is a local consumption of 2,225,000, and about 1,250,000 additional in the markets of the neighbouring colonies. This gives a total consumption of 3,475,000, leaving a present surplus of 4,775,000.

Mutton preserving works.

There are already in the Colony works for preserving mutton, whose requirements have for some years past averaged about 600,000 sheep, while the present limited frozen-meat trade requires some 400,000 more, reducing the surplus to 3,850,000 sheep. In one sense this is by no means a very large quantity, as it represents considerably less than the yearly consumption of London, and, compared with the total European production, it is but a trifling percentage.

Import of mutton, United Kingdom.

The value of mutton imported into the United Kingdom during 1891 was £3,282,000, representing 186,255,328 lb.; besides this there was an import of sheep to the value of £663,015, the number being 344,504. These two classes of imports would be equal to about 4,224,800 carcasses of Australian mutton, reckoning the average carcass at 48 lb. The present New South Wales surplus, as will be seen above, is 4,775,000.

Boiling down.

As regards the most economical method of dealing with the surplus, various plans have been proposed. Boiling down for tallow, which saved the pastoral industry fifty years ago, has again been suggested for adoption, but conditions have greatly altered during the interval, and good mutton tallow is now sold in the Sydney market for £22 per ton, at which price, after deducting expenses of casks and manufacture, and allowing for the value of the skin, wool, and other products, would leave the grazier the following prices for the various classes of sheep named :—

Boiling Down.—Charges.

	Ewes.							
	52 lb.		47 lb.		42 lb.		38 lb.	
	s.	d.	s.	d.	s.	d.	s.	d.
Cask	0	5¾	0	4¾	0	3⅝	0	2¾
Wages and maintenance	0	6¾	0	6⅛	0	5½	0	4⅞
Freight and incidental	0	4½	0	3¾	0	2⅞	0	2⅛
Total per sheep	1	5	1	2⅝	1	0		9¾

Returns.

	Ewes.							
	52 lb.		47 lb.		42 lb.		38 lb.	
	s.	d.	s.	d.	s.	d.	s.	d.
Tallow	5	6	4	6¼	3	6⅜	2	7⅞
Tongue, oil, shanks, &c.	0	2	0	2	0	2	0	2
Skins (average 6 months wool)	2	0	1	9⅝	1	7⅜	1	5½
Total per sheep	7	8	6	5⅞	5	3¾	4	3⅜
Net value of sheep	6	3	5	3¼	4	3¾	3	5⅝

The foregoing prices are certainly not remunerative, especially when cost of trucking or droving, or carriage of tallow to Sydney, and the maker's profit have been allowed for.

Mutton preserved in tins.

The practice of tinning meat has been in vogue for many years, the principal company now in operation being in receipt of a subsidy obtained from a levy on certain stock-growers in proportion to the number of sheep sold by them in the Metropolitan market. The main design of the company is to keep up the price of sheep, and the graziers pay subsidy with this object in view.

Small demand for tinned meat.

There is at best but a limited market for tinned meats, and the project of absorbing the surplus of the Colony in this way has never been seriously entertained. The export price of tinned mutton may be set down at 3¾d. per lb., from which, deducting charges of manufacture, and adding the value of the skin, wool, and other products, give prices as follows:—

Tinning.—Charges.

	Ewes.								Wethers.					
	52 lb.		47 lb.		42 lb.		38 lb.		52 lb.		47 lb.		42 lb.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Tin	1	1	0	11	0	9	0	8	1	4	1	2	1	0
Cask	0	5	0	4⅜	0	3¾	0	3	0	4⅝	0	4	0	3⅜
Wages and maintenance	1	2½	1	1⅛	0	11¾	0	10⅝	1	2½	1	1⅛	0	11¾
Freight and incidental	0	6	0	5¼	0	4⅜	0	3¾	0	6¼	0	5⅜	0	4⅝
Total per sheep	3	2½	2	9¾	2	4⅞	2	1⅜	3	5⅝	3	0½	2	7¾

Returns.

	Ewes.								Wethers.					
	52 lb.[1]		47 lb.		42 lb.		38 lb.		52 lb.		47 lb.		42 lb.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Tinned meat	4	0¾	3	5¼	2	9¾	2	6	5	0	4	4½	3	9
Tallow	4	9¾	4	2⅝	3	7⅝	3	0½	4	5	3	10	3	2⅞
Skins (average 6 months wool)	2	0	1	9⅝	1	7⅜	1	5½	2	0	1	9⅝	1	7⅜
Tongue, soups, bone, &c.	0	10	0	9	0	8	0	7	0	10	0	9	0	2½
Total per sheep	11	8½	10	2½	8	8¾	7	7	12	3	10	9⅛	8	9¾
Net value of sheep	8	6	7	4¾	6	3⅞	5	5⅝	8	9⅝	7	8⅝	6	2

These, as in the foregoing instances, are prices in the Sydney markets, and therefore include trucking or droving charges, which should be deducted, as well as an allowance for profit to the persons conducting the manufacture.

Frozen mutton.

The question of freezing mutton for the European market has been for some little time very prominently before the community The price of New South Wales mutton in the London market varied during the first nine months of 1892, between 3¼d. and 2¼d., the average being 2¾d., which would represent 1⅜d. in Sydney, or other point of shipment. The local charges for killing, bagging, trucking, freezing, &c., represent about ⅝d. per ℔., but the skin, wool, and by-products are on an average equal to ¾d. per ℔. of the carcass frozen, so that the price to the grazier may be set down as follows :—

Freezing.—Charges.

	Wethers.		
	'52 lb.	47 lb.	42 lb.
	s. d.	s. d.	s. d.
Bagging and freezing	0 9	0 8⅛	0 7¼
Wages and maintenance	1 4½	1 2⅞	1 1⅜
Freight and incidental	0 8⅜	0 7½	0 6¾
Total per sheep	2 9⅞	2 6½	2 3⅜

Returns.

	Wethers		
	52 lb.	47 lb.	42 lb.
	s. d.	s. d.	s. d.
Frozen meat	5 4⅝	4 10½	4 4¼
Tallow	1 0	0 10⅞	0 9¾
Skins (average 6 months wool)	2 0	1 9⅝	1 7⅜
Tongue, soups, &c.	0 2½	0 2½	0 2½
Total per sheep	8 7⅛	7 9½	6 11⅞
Net value of sheep	5 9¼	5 3	4 8½

From the foregoing figures must, however, be deducted the profit which the persons undertaking the operations of freezing have a right to expect.

Question difficult to solve.

A satisfactory solution of the question of disposing of the surplus stock by export to Europe is surrounded with great difficulty. It has not yet been ascertained whether a remunerative price for mutton can be maintained in London, nor what is often lost sight of—whether the Colony, under the present conditions of stock-raising, is able to fatten off the surplus stock it now produces; this last is very doubtful. One of the essentials of a successful export trade is continuity of supply, without which the business cannot thrive. On page 352 there is given a statement of the estimated losses which the pastoralists have suffered through drought during a period of eighteen years. From this it appears that in only nine of those years has there been no loss through the seasons. In some of the other years the loss has been extreme, and a recurrence of similar seasons would leave little of the cast available for export, even if it were possible to fatten the stock. These are matters which require consideration in connection with the export trade from which so great hopes are entertained.

PART XIII.

Law and Crime.

APPREHENSIONS.

HE law of New South Wales permits proceedings against persons charged with crime to be initiated either by arrest summons. During 1891 there were 44,854 arrests made, n addition to this number the police took proceedings by ions against 21,510 persons, while there were 10,886 cases in summonses were issued at the instance of municipal or other officers and private persons. The following table shows the fication of the offences for which arrests were made or sum- es issued :—

Offences.	Total Apprehensions.			Police cases in which proceedings were taken by summons	Proceedings by private summons	Total cases of all kinds.
	M.	F.	Persons.			
st the person	3,155	200	3,355	1,977	1,421	6,753
st property, with iolence	857	133	990	177	141	1,308
st property, without iolence	4,388	485	4,873	499	723	6,095
ry and offences against he currency	154	3	157	1	......	158
st good order, includ- g drunkenness	27,407	5,471	32,878	8,631	2,915	44,424
cluded in the preceding	2,301	300	2,601	10,225	5,686	18,512
Total	38,262	6,592	44,854	21,510	10,886	77,250

Charges often of a trivial nature.

the number shown in the foregoing table as being arrested, were dismissed, 36,596 were summarily convicted, and were committed for trial to the higher Courts. Although otal number of arrests may appear large, it must be remem- that many of the offences charged are of a very trivial character. For instance, during 1891 there were 2,311 arrests for lunacy and vagrancy, and 3,223 for breaches of various Acts. Under the heading of offences against good order, such as drunkenness, riotous and indecent behaviour, and obscene language, there were 29,889 arrests, making a total of 35,423, or nearly 79 per cent. of the whole number of arrests for the year.

Number of arrests.

The following table shows the number of arrests made by the police in the Metropolitan and Extra-Metropolitan police districts, and distinguishes at the same time the various classes of offences :—

Arrests for—	Metropolitan.	Extra-Metropolitan.	Total.
Offences against the person	1,836	1,519	3,355
Offences against property, with violence...	594	396	990
Offences against property, without violence	2,485	2,388	4,873
Forgery, and offences against the currency	62	95	157
Offences against good order, including drunkenness	16,268	16,610	32,878
Offences not included in the foregoing	1,254	1,347	2,601
Total	22,499	22,355	44,854

Arrests for drunkenness.

No less than 49 per cent. of the arrests, therefore, were for drunkenness, either with or without disorderly conduct. The following table shows the number of arrests for this offence in the two divisions adopted in the last table :—

Arrests for—	Metropolitan.	Extra-Metropolitan.	Total.
Drunkenness only	8,507	8,043	16,550
Drunk and disorderly	2,877	2,531	5,408
Habitual drunkenness	58	59	117
Total.................	11,442	10,633	22,075

Number of arrests.

The number of arrests during 1891 was larger than in any year since 1886. But though the percentage to the whole population greatly exceeds that of the two previous years, it compares favourably with other years, as the next table shows. The increase of arrests in 1890 over those of the previous year was largely among the more serious offences against the person and against property with violence, and was a regrettable concomitant of the depression in some avenues of employment. It is a noteworthy feature of the social life of the Colony that the opposite conditions of unbounded prosperity and severe depression are each conducive to crime. The number of arrests during the ten years ending with 1891 was:—

Year.	Arrests.	Percentage to population.	Year.	Arrests.	Percentage to population.
1882	39,758	4·98	1887	44,094	4·39
1883	43,177	5·15	1888	42,579	4·11
1884	46,199	5·23	1889	38,345	3·56
1885	48,261	5·20	1890	38,568	3·50
1886	48,854	5·04	1891	44,854	3·92

Number of Police.

The number of police in the Colony during the years 1884-91 was

Year.	Metropolitan.	Country.	Total.
1884	423	947	1,370
1885	466	977	1,443
1886	476	986	1,462
1887	502	989	1,491
1888	518	995	1,513
1889	543	1,024	1,567
1890	594	1,057	1,651
1891	643	1,022	1,665

Duties of Police.

The protection of life and property does not form the whole of the duty performed by the police in this Colony. On the contrary, a very large portion of their time is taken up with administrative duties, such as the collection of the electoral rolls, the agricultural and stock schedules, and returns of works and manufactories; in many instances, too, the police act as Clerks of Petty Sessions and Mining Wardens, and fill other offices having no direct connection with police duties. The test sometimes applied as to the law-abiding character of the population of the different colonies, as deduced from the apparent number of persons protected by one

Police in different Colonies.

police officer, is entirely worthless unless the circumstances of the duties performed and the diverse areas of the colonies are made elements of such comparison. The numbers of police in the various colonies, and the proportion to the civilian population, are however given in the following table for what they may be worth. The figures refer to the beginning of 1892; the northern territory of South Australia is not included :—

Colony.	Number of Police.			Proportion of Inhabitants to one Police Officer.
	Metropolitan.	Country.	Total.	
New South Wales	577	1,088	1,665	687
Victoria	740	795	1,535	746
Queensland	211	906	1,117	359
South Australia................	171	225	396	802
Western Australia	35	204	239	213
Tasmania	50	258	308	483
New Zealand	42	461	503	1,252

Police in cities.

A comparison of cities is given in the next table, and it would appear that the colonial capitals have proportionately less police supervision than many of the places enumerated in the list This however, of itself, argues nothing in favour of the law-abiding character of the population of the cities named, but rather that a large number of police could with advantage be added to the force now employed for their protection :—

Cities.	Strength of Police.	Population to each Police Constable.	Cities.	Strength of Police.	Population to each Police Constable.
Australasia—					
Sydney	577	664	Manchester.......	870	429
Melbourne	740	663	Edinburgh	500	500
Brisbane.........	211	481	Glasgow	1,093	503
Adelaide.........	171	779	Belfast.............	800	287
Perth	35	241	New York	3,174	472
Hobart	50	669	Philadelphia.....	1,624	643
Wellington ...	42	791	Chicago............	1,050	810
Auckland	48	1,065	Brooklyn	777	975
London	14,261	388	Boston	780	540
Liverpool	1,259	439	San Francisco ...	404	790

Ages and offences of persons arrested.

The ages of persons arrested for various classes of offences during the year 1891 are given below. It will be seen that the most serious offences were charged against persons between the ages of 20 and 30, while those against good order, consisting chiefly of drunkenness, were committed by persons from 20 to 50 years :—

Offences.	Ages.										Total Apprehensions.
	Under 10.	10 and under 15.	15 and under 20.	20 and under 25.	25 and under 30.	30 and under 35.	35 and under 40.	40 and under 45.	45 and under 50.	50 and upwards.	
Against the person	1	20	217	671	869	493	389	293	145	257	3,355
Against property, with violence	6	46	80	218	237	146	82	65	35	75	990
Against property, without violence	44	391	550	813	1,062	682	453	318	171	380	4,873
Forgery and offences against the currency ..	..	..	12	35	35	22	13	16	3	21	157
Against good order, including drunkenness ..	32	141	1,402	3,661	5,674	5,167	4,264	3,868	2,777	5,892	32,878
Not included in the preceding	92	291	235	319	396	372	265	230	156	245	2,601
Total............	175	889	2,565	5,717	8,273	6,882	5,466	4,790	3,287	6,870	44,854

Ages of offenders.

The proportion of offences committed at different ages varies very little from year to year. In the following table this proportion is shown for the year 1891, together with the distribution of the population at the same period of life :—

Age Groups.	Population.		Persons Apprehended.		Percentage of Arrests at Various Ages.	
	Males.	Females.	Males.	Females.	Males.	Females.
Under 15 years	218,433	213,336	949	115	0·4	0·05
15 and under 20	54,043	54,195	2,050	455	3·8	0·8
20 ,, 25	57,599	53,111	4,661	1,056	8·1	2·0
25 ,, 30	59,639	46,637	7,105	1,168	11·9	2·5
30 ,, 35	51,835	36,397	5,934	948	11·5	2·6
35 ,, 40	40,164	27,090	4,707	759	11·7	2·8
40 ,, 45	31,168	21,986	4,039	751	13·0	3·4
45 ,, 50	26,814	18,478	2,834	453	10·6	2·4
50 years and upwards	68,308	44,721	5,983	887	10·1	2·0
Total...........	608,003	515,951	38,262	6,592	6·3	1·3

Native-born offenders.

At the census of 1891 the native-born population of New South Wales were 65 per cent. of the whole, while of the 44,854 persons arrested during 1891 only 14,741, or 32·9 per cent., were born in the Colony. These figures, however, must not be taken by themselves as proving the law-abiding character of the native-born compared with the rest of the community, as the bulk of the population below 20 years of age are Australian born; besides amongst the British and Foreign born population males largely predominate. Unfortunately the returns of birthplaces of persons arrested do not admit of a distinction being made between those below and above 20 years of age. The native countries of all persons arrested during 1891 will be found in the following table:—

Country.	Against the person.	Against property, with violence.	Against property, without violence.	Forgery and offences against the currency.	Against good order, including drunkenness.	Not included above.	Total.
New South Wales	1,391	453	2,135	55	9,775	932	14,741
Victoria	191	59	293	12	1,300	92	1,947
Queensland	32	14	103	1	318	20	488
Other Australian Colonies..	131	27	193	2	965	100	1,418
England	622	149	1,022	41	7,122	591	9,547
Ireland	483	147	448	13	7,961	361	9,413
Scotland	163	52	239	11	2,659	144	3,268
Other British possessions....	46	9	84	1	480	57	677
France	20	7	45	2	184	22	280
Germany	55	14	48	9	465	67	658
China	65	14	72	2	291	34	478
Other Foreign Countries	156	45	191	8	1,358	181	1,939
Total	3,355	900	4,873	157	32,878	2,601	44,854

Offenders born outside the Colony.

The proportion of arrests of people born in other parts of the British Empire outside Australasia exhibits a great decline since 1881, which may be partly attributed to the restricted influx from immigration. At the date of the 1891 census, the proportion of British-born, other than Australasian, residing in the

Colony was 24·1 per cent. of the total population, which is 3·6 per cent. less than that of the census of 1881 :—

Year.	Total Apprehensions.	Percentage to Total Apprehensions of Persons born in			
		British Empire.			Foreign Countries.
		New South Wales.	Other Australasian Colonies.	Other parts of British Empire.	
1882	39,758	26·8	3·8	62·7	6·7
1883	43,177	27·6	4·2	61·8	6·4
1884	46,199	28·3	4·7	60·7	6·3
1885	48,261	27·1	5·2	61·8	5·9
1886	48,854	28·1	5·2	60·0	6·7
1887	44,094	30·1	6·3	56·7	6·9
1888	42,579	32·0	6·7	54·1	7·2
1889	38,345	33·8	7·2	52·4	6·6
1890	38,568	33·4	7·3	52·2	7·1
1891	44,854	32·9	8·6	51·0	7·5

The nominal religious profession of each person arrested is ascertained and entered in the charge-sheet. During 1891 the arrests of persons belonging to each of the various denominations were :—

Nominal religious professions of prisoners.

Religion.	Against the person.	Against property, with violence.	Against property, without violence.	Forgery and offences against the currency.	Against good order, including drunkenness.	Not included above.	Total.
Church of England	1,350	359	2,203	94	11,896	1,049	16,951
Roman Catholic	1,431	460	1,837	37	15,303	960	20,028
Presbyterian	248	65	377	7	3,058	189	3,944
Wesleyan	81	24	134	8	474	87	808
Congregational	9	4	32	....	76	10	131
Baptist	9	2	13	....	94	16	134
Lutheran	30	10	31	....	411	76	558
Salvation Army	5	1	8	1	32	11	58
Unitarian	2	3	3	....	21	1	30
Other Christian Denominations	27	7	29	2	143	44	252
Hebrew	18	7	30	1	56	19	131
Mahommedan	10	3	22	....	47	48	130
Pagan	60	10	59	1	335	33	798
Freethinker, &c.	19	15	25	5	215	9	288
Not stated	56	20	70	1	717	49	913
Total	3,355	990	4,873	157	32,878	2,601	44,854

Church of England and Roman Catholic offenders.

The proportion of persons who claimed to belong to the Church of England arrested to the total arrests was about the same in 1891 as it was ten years before, while that of the Roman Catholic denomination for the same period exhibits a decline of 2·8 per cent. Both the denominations named, however, at present occupy a less high position relative to the total population than they did in 1881, and according to the census of 1891, the falling off during the ten years in the number of adherents of the Church of England was 0·8 per cent., and Roman Catholic 2 per cent. The proportion of persons arrested belonging to denominations other than those mentioned above is small, and the returns do not call for any special comment. The following are the percentages of persons arrested compared with the total arrests, in regard to the three principal denominations, the period covered being the eleven years ending with 1891 :—

Year.	Total Apprehensions.	Percentage to Total Apprehensions.			
		Church of England.	Roman Catholics.	Presbyterians.	Others.
1881	41,402	38·0	47·4	8·1	6·5
1882	39,758	39·8	45·6	8·2	6·4
1883	43,177	38·9	46·1	8·1	6·9
1884	46,199	38·5	45·7	8·6	7·2
1885	48,261	38·3	46·0	8·8	6·9
1886	48,854	37·1	46·1	8·9	7·9
1887	44,094	37·4	45·1	9·2	8·3
1888	42,579	37·5	45·1	8·7	8·7
1889	38,345	38·5	44·5	8·5	8·5
1890	38,568	37·8	44·4	9·3	8·5
1891	44,854	37·8	44·6	8·8	8·8

The adherents of the Church of England at the census of 1881 were 45·6 per cent. of the whole population, and in 1891 were 44·8 per cent.; the Roman Catholics in 1881 were 27·5 per cent. of the whole, and 25·5 per cent. in 1891; the Presbyterians were 9·7 per cent. in 1881, and 9·7 per cent. in 1891; other denominations formed 17·2 per cent. of the total in 1881, and 20 per cent. in 1891.

Education of persons arrested.

The degree of education of those who were arrested has also been obtained as far as possible. Four grades of education were formerly adopted for classification purposes, but in consequence of the difficulty of defining the term "Superior Education," that classification has been abandoned. The degrees of education of persons arrested during 1891 are shown below:—

Offences.	Total Apprehensions.	Degree of Education.					
		Neither Read nor Write.		Read only.		Read and write and Superior Education.	
		M.	F.	M.	F.	M.	F.
Against the person..................	3,355	217	5	38	1	2,900	194
Against property, with violence	990	59	1	12	2	786	130
Against property, without violence	4,873	305	26	59	10	4,024	449
Forgery and offences against the currency	157	3	...	4	...	147	3
Against good order, including drunkenness	32,878	2,017	331	395	78	24,995	5,062
Not included in the preceding...	2,601	254	38	34	3	2,013	259
Total	44,854	2,855	401	542	94	34,865	6,097

Effect of education on crime.

The following table gives the percentage of persons arrested to each degree of education in a period of ten years. A superficial glance at the figures would seem to show that the progress of education has not been attended with that decrease in crime, which the friends of education confidently expect to follow in its train. But it must always be remembered that although the proportion of persons arrested who can read and write has much increased of late years, such increase is merely a proof of the spread of education, even amongst those whose environment offers inducement to the commission of crime :—

Year.	Total Apprehensions.	Percentage to Total Apprehensions.		
		Neither Read nor Write.	Read only.	Read and Write, and Superior Education.
1882	39,758	10·2	2·4	87·4
1883	43,177	8·9	2·5	88·6
1884	46,199	8·4	2·4	89·2
1885	48,261	8·1	2·0	89·9
1886	48,854	8·5	1·9	89·6
1887	44,094	8·8	1·6	89·6
1888	42,579	8·8	2·0	89·2
1889	38,345	8·5	1·7	89·8
1890	38,568	7·8	1·5	90·7
1891	44,854	7·3	1·4	91·3

Decrease of serious offences.

The best proof of the effect of the spread of education on crime is the notable decrease, which has for many years been observable, in the number of committals and convictions for serious offences. Although the direct effect of the spread of enlightenment cannot be otherwise gauged, there is ample evidence to warrant the assumption that education is doing its work as an active leaven for good throughout the community.

DRUNKENNESS.

Charges of drunkenness.

Of the 44,854 persons arrested during 1891, 22,075, or little short of one-half, were taken into custody on charges of drunkenness, and, in addition to the number given, 1,096 persons were proceeded against by summons for the same offence. The following table shows the total number of arrests in each police district, the arrests for drunkenness alone, and the proportion which the last-named bore to the total arrests :—

District.	Total Apprehensions for all Offences.	Arrests for Drunkenness.			
		Males.	Females.	Total.	Percentage to Total Apprehensions.
Metropolitan	22,499	8,507	2,935	11,442	50·9
Eastern	3,564	1,640	82	1,722	48·3
North-eastern	3,504	1,604	154	1,758	50·2
Northern	2,343	1,173	29	1,202	51·3
North-western	1,486	639	70	709	47·7
Bourke	1,779	830	36	866	48·7
Western..............	3,021	1,218	98	1,316	43·6
South-western	2,839	1,272	90	1,362	48·0
The Murray	1,729	860	34	894	51·7
Southern	2,090	734	70	804	38·5
Total	44,854	18,477	3,598	22,075	49·2

Arrests for drunkenness in towns.

Persons arrested for drunkenness are chiefly residents in large towns, and it would be only natural to expect that, with an increase in the population of the towns, there will be an increase in the arrests for drunkenness. The number of arrests during each year since 1881 is shown in the following table, and it will be satisfactory to note that the decrease is not only in proportion to the population, but in the actual number of arrests. Much stress cannot, however, be laid on the falling off in the arrests, if there were not other evidence of the decrease of drunkenness, as a word of instruction from the Inspector-General of Police could, according to its tenor, increase or decrease the number of those apprehended on this charge. The decline in arrests has been

Decrease in intoxication.

coincident with a marked decrease in the consumption of intoxicants, so that it may be fairly assumed that drunkenness is on the wane:—

Year.	Arrests for Drunkenness.						Convictions for Drunkenness.	
	Total Arrests.	Males.	Females.	Percentage of—			Total.	Percentage to Total Population.
				Total Arrests to whole Population.	Males Arrested to Total Male Population.	Females Arrested to Total Female Population.		
1882	21,393	17,574	3,819	2·7	4·0	1·1	18,593	2·3
1883	23,178	19,244	3,934	2·8	4·2	1·0	20,991	2·5
1884	24,438	20,261	4,177	2·8	4·2	1·0	21,957	2·5
1885	26,291	21,944	4,347	2·8	4·3	1·0	23,782	2·6
1886	26,310	21,879	4,431	2·7	4·1	1·0	23,758	2·4
1887	22,706	19,229	3,477	2·3	3·5	0·8	20,596	2·1
1888	21,129	17,438	3,691	2·0	3·1	0·8	18,907	1·8
1889	18,355	14,887	3,468	1·7	2·6	0·7	16,496	1·5
1890	18,654	15,636	3,018	1·7	2·6	0·6	17,022	1·5
1891	22,075	18,477	3,598	1·9	3·0	0·7	20,323	1·8

Consumption of spirits.

The average consumption per inhabitant of spirits, wines, and fermented liquors since 1885 is given in the following table; also the total quantity of all classes of intoxicants consumed, expressed in terms of proof spirit. It will be seen that the consumption of intoxicants per inhabitant has declined during the period covered by the table, that of 1891 being 18 per cent. less than the first year shown :—

Year.	Spirits.	Wines.	Beer.	Equivalent in Alcohol (proof).
	galls.	galls.	galls.	galls.
1885	1·30	0·65	13·79	3·37
1886	1·20	0·72	12·32	3·23
1887	1·11	0·73	11·69	2·97
1888	1·10	0·76	11·01	2·88
1889	1·07	0·83	10·89	2·73
1890	1·09	0·73	10·63	2·68
1891	1·04	0·84	11·44	2·77

If the number of persons who render themselves liable to arrest may be fairly assumed to be in direct proportion to the amount of intoxicants consumed, a decrease in consumption is necessarily a sign of increased sobriety.

Habitual drunkenness.

The number of persons arrested for habitual drunkenness does not vary much from year to year, nor does the proportion of such arrests to the total arrests for drunkenness. The figures are given below, but they can hardly be said to be of much value. It would be a comforting thought, if it were true, that there were only 117 habitual drunkards in the community, or that such number only were known to the police. Unfortunately there is ample evidence that the number arrested does not represent a tithe of the habitual drunkards of the Colony :—

Year.	Number.	Percentage of arrests to total arrests for drunkenness.	Year.	Number.	Percentage of arrests to total arrests for drunkenness.
1882	141	0·65	1887	119	0·52
1883	100	0·43	1888	80	0·38
1884	108	0·44	1889	101	0·55
1885	116	0·44	1890	93	0·49
1886	113	0·43	1891	117	0·53

Drunkenness.

The question of the relative prevalence of drunkenness, as tested by the number of persons arrested for that offence in the different colonies, has received of late no little attention, and it has been made to appear that New South Wales in this regard holds a bad pre-eminence. The total arrests for drunkenness and the number per 1,000 of population in the different colonies, for the latest available years, were :—

	Total arrests for drunkenness.	Arrests, per 1,000 of population.
New South Wales	22,075	19·3
Victoria	18,501	16·5
Queensland	6,322	16·3
South Australia	2,987	9·4
Tasmania	988	6·9
New Zealand	5,900	9·5

During 1889 the arrests for drunkenness in New South Wales exhibited a very gratifying decrease as compared with those of

Deduction from number of arrests misleading.

the previous year, which reached a total of 21,129; and the figures for 1890 show only a very small increase upon those for 1889. Those for 1891, from causes already explained, do not compare favourably with the two former years. The figures for all the other Colonies show a slight decline, compared with those of the previous year. But an argument founded solely on the number of arrests for drunkenness is misleading, for a great deal depends upon the state of the law and the manner in which it is administered. The extent of the area supervised must also be taken into consideration, for it is evident that the law will be less strictly enforced in the sparsely settled districts of Queensland, South Australia, and Western Australia, than in the more thickly populated parts of Australia. The quantity of intoxicants consumed per head of the community is, perhaps, a better guide, though not always a safe indication, unless the manners and customs of the people are also taken into consideration. But where the habits of communities are so similar as is the case in regard to the Australasian Colonies, the consumption per head is a tolerably fair test. The figures given in the accompanying table may be taken as correct, with some slight hesitation as regards those relating to the consumption of beer in those Colonies where no excise duty was enforced, as Victoria, Queensland, South Australia, and Western Australia. In Victoria, where the returns are furnished by the brewers, the figures are probably overstated, causing the consumption of beer per head to appear largely in excess of that of New South Wales and other Colonies, although the habits of the community are very similar. As the table stands the amount of alcohol consumed is greatest in Western Australia and Victoria, while in New South Wales it is somewhat below the average for Australasia. In regard to Western Australia, in dealing with the consumption of intoxicants, the circumstance that the males largely exceed the females must not be neglected. If a comparison were made as to the consumption per head, excluding females, the case against Western Australia would be very materially altered:—

Consumption of intoxicants.

Consumption of Alcohol in each Colony.

Consumption of Intoxicants in the Australasian Colonies, 1891.

Colony.	Spirits.		Wine.		Beer, &c.		Equivalent in Alcohol (proof) per inhabitant.
	Total.	Per inhabitant.	Total.	Per inhabitant.	Total.	Per inhabitant.	
	galls.	galls.	galls.	galls.	galls.	galls.	galls.
New South Wales	1,268,368	1·11	961,579	0·84	13,057,982	11·42	2·83
Victoria......	1,358,900	1·19	1,969,192	1·72	19,739,218	17·23	3·93
Queensland	465,734	1·16	258,978	0·64	4,243,275	10·56	2·72
South Australia	206,902	0·65	526,419	1·66	3,565,064	11·23	2·61
Western Australia	75,014	1·47	209,819	4·12	572,224	11·23	4·15
Tasmania (1890)	92,209	0·64	24,073	0·17	1,329,671	9·29	1·88
New Zealand	439,829	0·70	108,028	0·17	4,814,811	7·65	1·74
Total and Means....	3,906,956	1·02	4,058,088	1·06	47,322,245	12·33	2·93

These figures at once dispose of the theory so persistently put forward as to the excessive prevalence of drunkenness in New South Wales, and the more effectually when it is borne in mind that the number of males engaged in laborious work is far larger here than in any other colony.

COURTS OF PETTY SESSIONS.

Magistrates' Courts.

The Magistrates' Courts or Courts of Petty Sessions in the Metropolitan District are presided over by Stipendiary Magistrates, and in the country districts Police Magistrates and Justices of the Peace adjudicate, the latter being honorary officers. Except in a few special cases the jurisdiction of the magistrates is limited to offences involving a penalty of six months' imprisonment and under, although the magistrates have power to enforce cumulative sentences up to the maximum limit on prisoners convicted on more than one charge. All persons, except those committed by Supreme Court Judges and Coroners who are entered on the charge-sheet of the police, must be brought before magistrates to be by them summarily dealt with or committed to a higher Court. The Stipendiary Magistrates, together with a Justice of the Peace, specially appointed by the Executive

Council, preside over Courts in the metropolitan area for licensing the sale of fermented and spirituous liquors, while in each licensing district of the other parts of the Colony these duties are performed by a Police Magistrate and two Justices of the Peace appointed for the purpose.

Cases dealt with by Magistrates.

During 1891 there were 75,804 cases dealt with by the magistrates. In 43,408 of these the persons charged with offences were arrested, and in 21,510 cases they were summoned by the police; while in the remaining 10,886 cases proceedings were taken by private persons. Of the total number brought before the Magistrates 74,222 were dealt with summarily, and convictions recorded in 55,711 cases, while 18,511 were dismissed either on their merits or for want of prosecution. In the remaining cases, 1,582 in number, the persons accused were committed for trial in the higher Courts of the Colony. Dividing the offences into the six groups usually adopted, the number of persons brought before the Magistrates' Courts, and the manner in which their cases were dealt with, during 1891, were as follows :—

Offences.	Number of Persons brought before the Magistrates' Courts.						
	After Arrest.	By summons (inclusive of private summonses.)	Total.	Discharged for want of Prosecution or for want of Evidence.	Whose Cases were Dismissed on the merits.	Summarily Convicted.	Committed for Trial.
Against the person	3,072	3,398	6,470	2,043	1,115	2,904	408
Against property, with violence	881	318	1,119	317	117	574	191
Against property, without violence	4,666	1,222	5,888	1,282	931	2,868	807
Forgery and offences against the currency ...	151	5	156	16	18	12	110
Against good order	31,599	11,546	43,145	3,750	2,725	36,649	21
Not included in the preceding	3,039	15,907	18,946	4,767	1,430	12,704	45
Total number summoned or apprehended (not including lunacy cases and cases of a purely civil nature).	43,408	32,396	75,804	12,175	6,336	55,711	1,582

Civil actions not included.

Civil actions and lunacy cases are not included in this table, but it includes arrests or summonses for breaches of various Acts, and for other offences, which, from a moral point of view, are not to be reckoned as crimes, although they are such in the eyes of the law. These figures differ slightly from those given on page 395, which refer to persons arrested, some of whom do not appear before the magistrates. A person charged with more than one offence at the same time appears in the above table under each charge; as, for instance, a person taken in custody for drunkenness and assault is included under each of the classifications, "good order" and "against the person," so that the total, 75,804, represents more truly charges than persons.

Summary convictions.

The number of summary convictions, the nature of the convictions, and the punishments inflicted by magistrates are given in the following table for the year 1891 :—

Punishments.*	Total Convictions.	Offences against the person.	Offences against Property, with violence.	Offences against Property, without violence.	Forgery and Offences against the Currency.	Offences against good order.	Offences not included in the preceding.
Fines paid	30,991	1,603	301	511	..	18,549	10,027
Fines unpaid†	1,030	43	2	23	...	539	423
Imprisonment in lieu of paying fine or finding security.....................	16,264	480	224	215	4	14,629	712
Peremptory imprisonment	4,581	406	42	1,963	8	1,736	426
Imprisonment, with whipping	...	...	...	...	...	...	...
Bound over, with or without sureties	278	78	1	22	...	157	20
Other punishments.........	2,567	294	4	134	...	1,039	1,096
Total	55,711	2,904	574	2,868	12	36,649	12,704

* A person punished for more than one offence appears separately for each conviction.

† Recovered by levy and distress, no proceedings having been taken after return to distress warrant and no goods found to levy upon.

Penalties inflicted.

The number of fines paid, as shown above, was 30,991, but it is probable that some of those who were imprisoned for default in immediately paying the fine imposed were discharged before the term had expired, the fine having been paid in the meanwhile. The number sentenced to peremptory imprisonment was 4,581, and adding those incarcerated in default of paying the fine, viz., 16,264, the total number imprisoned was 20,845, out of 55,711 summarily dealt with by the magistrates, or 37·4 per cent. The following table gives the number of summary convictions before magistrates during the past ten years :—

Year.	Offences against the person.	Offences against property.	Other Offences.	Year.	Offences against the person.	Offences against property.	Other Offences.
1882	5,350	4,014	40,762	1887	4,667	3,876	45,071
1883	6,257	3,395	45,811	1888	4,779	4,669	41,428
1884	5,810	3,594	48,502	1889	4,658	3,931	40,114
1885	5,159	3,649	50,537	1890	4,473	3,666	39,963
1886	5,187	3,676	53,405	1891	2,904	3,442	49,365

Decline of summary convictions.

From 1887 to 1890, the number of summary convictions steadily declined ; the returns of 1891, however, show the large increase of 23 per cent. The serious depression existing during 1891 caused many persons to be deprived of settled employment, some of whom probably were tempted into idleness and disorder. Notwithstanding the large increase shown for 1891, the record of that year is below that of each of the years 1885 and 1886, although the population in the meantime had increased by about 20 per cent., and the number of statutory offences is constantly being augmented.

Decrease in committals for trial.

Convictions increasing.

Omitting from consideration summons cases, and dealing only with arrests by the police, three facts are noticeable—that the percentage of arrests to the total population has fluctuated considerably during the past ten years, and was lower during the three years ending with 1891 than in any former period ; that the number of summary convictions obtained is now proportionately greater than formerly, while at the same time the number of committals for trial to the superior courts shows a remarkable tendency to decrease. The following table shows the percentage of summary convictions by magistrates, and the committals to higher courts :—

Year.	Arrests.	Summarily convicted.	Summarily acquitted or discharged.	Committals.
	Percentage of arrests to the whole population.	Percentage of summary convictions to total arrests.	Percentage of those acquitted or discharged to total arrests.	Percentage to total arrests.
1870	3·3	69·0	24·7	6·3
1875	4·2	70·1	25·3	4·6
1880	4·9	76·9	18·4	4·7
1885	5·2	82·9	14·1	3·0
1886	5·0	82·2	14·8	3·0
1887	4·4	81·6	15·3	3·1
1888	4·1	79·9	16·8	3·3
1889	3·6	78·8	17·4	3·8
1890	3·5	80·4	16·0	3·6
1891	3·9	81·6	14·8	3·6

Small Debts.

The Courts of Petty Sessions have also civil jurisdiction, in regard to small debts; that is, in cases where the amount sued for does not exceed £10.

INQUESTS.

Coroners' Inquests.

The number of deaths during 1891, the causes of which were investigated by Coroners, was 1,102 of males and 217 of females, a total of 1,319 inquests. The findings of the courts were that in 292 cases the death was due to certain specific diseases, in 892 cases to violence, while the causes of death in 135 cases were not clearly defined. Inquiries were held into the causes of 120 fires, and the verdicts returned were accidental in 13 cases, arson in 32, not sufficient evidence in 74, and in one case carelessness.

SUPERIOR COURTS.—CRIMINAL JURISDICTION.

Procedure of the Supreme Court.

A Judge of the Supreme Court presides over the Central Criminal Court of Gaol Delivery held at Sydney. All prisoners are tried by a jury of twelve, chosen by ballot from the panel provided by the Sheriff. In capital cases the right to challenge both by the Crown and accused is limited, except for cause shown, to twenty jurors, and for offences other than capital, whether as felonies or misdemeanours, the challenge cannot exceed eight. Under Act 55 Vic. No. 5, which was assented to in December, 1891, a person charged with an indictable offence is privileged, but not compelled, to give evidence in any court on hearing of such charge. Prior to the passing of this Act such a proceeding was allowed on trials for bigamy only. An accused person may also make a statement at the close of the case for the prosecution without being liable to examination thereupon by counsel for the Crown, or by the Court. The verdict of the jury must be unanimous, for even if eleven jurors were agreed their verdict could not be accepted. If the jury cannot agree they may be locked up until they either give a unanimous verdict, or are discharged by the Court. If no verdict is returned the prisoner is liable to be tried over again by another jury.

Accused allowed to give evidence.

Gaol deliveries.

In addition to the supreme, civil, and criminal sittings of the Court held in Sydney, the Judges go on circuit once in each half-year, and hold Courts of Gaol Delivery called Circuit Courts, for dealing with the more serious class of criminal cases, especially those in which the capital penalty is involved, and for hearing civil causes at certain circuit towns, viz.:—In the north—Maitland, Tamworth, Armidale, and Grafton; in the west—Mudgee, Bathurst, Dubbo, and Broken Hill; in the south—Goulburn, Yass, Wagga Wagga, Albury, Deniliquin, Young, and Hay.

Courts of Quarter Sessions.

The Courts of Quarter Sessions are presided over by Chairmen, who also perform the duties of Judges of the District Courts. There are seven Chairmen of Quarter Sessions; two of these preside over the Courts in the Metropolitan and Hunter Districts, and one each in the following districts:—Southern, south-western, northern, north-western, and western. Any offences, except capital ones, are within the jurisdiction of the Court.

Questions reserved for Supreme Court.

On the trial of prisoners at Quarter Sessions, the Chairman, at the request of the prisoner's counsel, must reserve questions of law for the consideration of the Supreme Court, or he may so act *motu proprio*.

The number of trials, convictions, and acquittals in the superior courts during 1891 was as follows :—

Districts.	Committals, irrespective of year.	Trials.	Convictions.	Acquittals.
Supreme and Circuit Courts :—				
Central Criminal Court, Sydney	117	117	65	52
Albury	12	12	5	7
Armidale	11	11	9	2
Bathurst	30	30	20	10
Broken Hill	15	15	8	7
Deniliquin	10	10	6	4
Dubbo	30	30	17	13
Goulburn	24	24	13	11
Grafton	10	10	4	6
Hay	9	9	5	4
Maitland	17	17	12	5
Mudgee	10	10	4	6
Tamworth	17	17	11	6
Wagga	17	17	12	5
Yass	2	2	1	1
Young	2	2	1	1
Courts of Quarter Sessions :—				
Metropolitan and Hunter	734	654	486	162
Southern	68	55	27	27
Northern	101	94	54	39
Western	134	127	80	39
South-western	71	63	46	16
North-western	134	130	78	50
Total	1,575	1,456	964	473

Of the 1,242 persons committed to Courts of Quarter Sessions, 4 absconded and 1 died before trial, while in 24 cases the Attorney-General acting as a Grand Jury filed no bill, and 90 cases were withdrawn by the Crown. Included in the number of acquittals in the same courts are 19 cases in which the jury disagreed.

Decrease in committals for trial.

The following statement shows the character of the offences for which prisoners were tried during each year since 1882, and affords material for interesting study :—

Trials for Prominent Offences in Superior Courts, 1882–91.

Offences.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.
Murder	7	10	16	18	17	11	22	13	9	17
Attempted Murder	7	4	10	7	5	7	9	9	8	7
Manslaughter	19	10	21	12	25	7	22	16	25	25
Wounding Maliciously, unlawfully	92	77	61	42	102	67	87	48	119	118
Rape, and Attempts to commit	24	15	19	9	41	7	16	22	14	21
Indecent Assaults	27	15	42	36	33	40	47	38	35	43
Unnatural Offences	9	4	12	14	14	18	13	10	25	20
Arson	20	9	28	15	16	10	15	23	21	21
Robbery with Violence, including Garrotting	47	47	48	39	43	40	24	42	55	44
Larceny and receiving Stolen property	332	377	271	261	251	211	178	255	246	255
Stealing in a dwelling, including Burglary	136	80	113	120	130	151	186	167	91	168
Forgery and Uttering	92	62	88	92	128	96	114	107	90	100
Stealing from the Person	109	108	66	44	61	44	54	70	56	61
Obtaining Money, &c., under false pretences	112	88	106	68	72	96	70	87	94	73
Embezzlement	50	39	39	19	39	38	47	38	25	60
Horse-stealing	104	105	96	88	78	76	70	71	74	50
Cattle-stealing	19	25	15	33	24	26	22	25	26	35
Sheep-stealing	37	19	22	20	33	18	19	20	19	4
Perjury	24	19	14	3	8	7	21	15	10	8

Epidemic of crime.

An inspection of this table will show how curiously an epidemic of a particular kind of crime sometimes appears to set in. Perhaps the strongest example that could be cited is that of the blood crimes—murder, manslaughter, and maliciously wounding—which taken together are found to be above or below the average in alternate years, while unnatural offences and crimes against females show much the same features, and in the same years. Probably this is merely a coincidence, but the following figures, which represent the number of murders and the related crimes, and of offences against females and unnatural offences, are at least curious :—

Year.	Number of Offences.	Year.	Number of Offences.
1882	185	1887	157
1883	135	1888	233
1884	181	1889	156
1885	138	1890	235
1886	237	1891	251

Committals and convictions.

The following table shows the number of persons committed for trial by a jury each year since 1870, with the number of convictions obtained, and the proportion of the same to the general population. It will be seen that the proportion of offences deemed of sufficient gravity to be tried by a jury has largely decreased during the period. The committals in certain years include some cases standing over from the previous year :—

Year.	Committals for trial.	Convictions.	Proportion of population committed.	Proportion of population convicted.	Year.	Committals for trial.	Convictions.	Proportion of population committed.	Proportion of population convicted.
			Per 10,000 of population.	Per 10,000 of population.				Per 10,000 of population.	Per 10,000 of population.
1870	1,037	601	21·1	12·2	1881	1,593	1,066	20·8	13·9
1871	1,084	628	21·3	12·3	1882	1,846	1,065	23·1	13·3
1872	1,073	643	20·3	12·2	1883	1,667	1,012	19·9	12·1
1873	1,166	647	21·4	11·8	1884	1,643	927	18·6	10·5
1874	1,311	700	23·2	12·4	1885	1,456	787	15·7	8·5
1875	1,245	707	21·2	12·0	1886	1,613	957	16·6	9·9
1876	1,391	822	23·0	13·6	1887	1,502	854	14·9	8·5
1877	1,411	829	22·4	13·1	1888	1,547	915	14·9	8·8
1878	1,740	959	26·4	14·5	1889	1,575	910	14·8	8·5
1879	1,743	1,090	25·2	15·7	1890	1,554	955	14·1	8·7
1880	1,717	1,148	23·6	15·8	1891	1,575	964	13·8	8·4

The number of convictions obtained does not vary much from year to year, though there seems to be a tendency of late years for juries to take a much more stringent view of the cases put before them than was formerly the practice :—

Year.	Percentage of committals.		Year.	Percentage of committals.	
	Convicted.	Acquitted or discharged.		Convicted.	Acquitted or discharged.
1882	57·7	42·3	1887	56·9	43·1
1883	60·7	39·3	1888	59·1	40·9
1884	56·4	43·6	1889	57·8	42·2
1885	54·1	45·9	1890	61·5	38·5
1886	59·3	40·7	1891	61·2	38·8

Causes of apparent high rate of crime.

The convictions in the higher courts of New South Wales, taken over a series of years, greatly exceed, both in number and in proportion, those of any other Colony. So marked is this fact that much speculation has been indulged in as to the probable cause of the anomaly. It is admitted that the people of all the colonies are practically derived from the same stock, while their occupations and habits of life are fairly alike, and a theory has been hazarded that the high rate of crime in New South Wales is due to a blood taint derived from the original bond-population of this Colony. Such theory is manifestly absurd, as Tasmania, the colony which received proportionately the largest number of convicts, and whose population has been least diluted by immigration, has for many years had the most favourable record of convictions. There is no evidence that such a population now exists anywhere in these colonies ; it certainly does not exist in New South Wales. But, though the gratuitous theory above alluded to may be easily disposed of, the fact remains that the largest proportion of convictions in the higher courts occurs in New South Wales. Western Australia has been omitted from the comparison, as its sparse population and peculiar situation would warrant the anticipation of a large amount of crime of a kind not found in the older settled colonies :—

Convictions after Trial in Superior Courts in Australasia, 1890.

	Number.	Per 10,000 of population.
New South Wales	955	8·7
Victoria	616	5·5
Queensland	275	7·1
South Australia	155	4·8
Tasmania	46	3·2
New Zealand	227	3·4

Number of convictions.

In the foregoing table it will be observed that New South Wales has by far the largest number of convictions after trial in the Superior Courts than any of the other Colonies in the Group. It may be mentioned, however, that South Australia and Tasmania have no intermediate Courts like the Quarter Sessions of New South Wales, and the District Courts with criminal jurisdiction of some of the other Colonies, and many persons who would be committed to higher Courts in New South Wales are convicted in the Magisterial Courts of South Australia and Tasmania; nevertheless this would only slightly affect the result in those Colonies, and the fact remains that New South Wales stands in the unenviable position of having by far the largest number of convictions after trial of any of the Group.

Criminals come from floating population.

There has been in New South Wales for many years a large population whose abode in any district is determined by the existence of a demand for unskilled labour, and it is from the ranks of this floating population that a large proportion of the persons convicted of crime is derived. All the colonies have, to a greater or less extent, this class of population; but in New South Wales it is numerically the largest. As these people settle down to regular employment in a fixed abode and acquire interests apart from the excitements of an unsettled life, crime will be found to diminish. The neighbouring colony of Victoria, where the decrease of convictions has steadily kept pace with the settlement of its population, may be cited as an example of this truth, the proportion of convictions being reduced in 1890 to 5·5 per 10,000, as compared with 10·1 in 1866.

Strict administration of law in N. S. Wales.

The laws relating to crime are somewhat similar in all the colonies; but the administration of these laws may possibly be more rigorous in New South Wales than in any other colony. This has already been shown to be the case in regard to drunkenness, and offers an additional explanation of the large number of convictions obtained in New South Wales. It should also be remembered that in this Colony there is no Act to prevent the influx of criminals, such as they have, and enforce stringently, in some of the other Colonies.

No law against influx of criminals.

Capital punishment.

In the early days of settlement, the spectacle of judicial executions must have been extremely common. Offences which are now dealt with by magistrates in a summary way, and deemed sufficiently punished by imprisonment for two or three months, were in some cases punishable by death. This barbarous system lasted until about the year 1832, when the offences of stealing from a dwelling money or goods to the value of £5, and killing or stealing horses, cattle, or sheep, were removed from the category of capital crimes. Five years later the punishment of death was abolished in the following cases:—Riotous destruction of buildings and machinery, riotous assembling, rescue of a person convicted of murder, seducing a person in the Royal Navy from duty, inciting to mutiny, administering unlawful oaths purporting to bind the person taking the same to commit any treason or murder, breaking prison, escaping from lawful custody more than once, smuggling while armed, shooting at any vessel, or maliciously shooting or maiming any officer of the Navy or Revenue Service. Executions have been less numerous of late years than formerly, the dread penalty being carried out in only a small proportion of cases wherein the death sentence has been pronounced. The number of executions since 1824 is given herewith. In three years only have there been no executions. Four females have been hanged during the period in question:—

Females executed.

Number of Capital Convictions and Executions, 1825 to 1891.

Year.	Convictions.	Executions.	Year.	Convictions.	Executions.	Year.	Convictions.	Executions.
1825	54	9	1848	6	5	1871	11	3
1826	72	21	1849	6	4	1872	19	3
1827	93	29	1850	5	4	1873	10	4
1828	106	28	1851	8	2	1874	14	3
1829	112	52	1852	10	5	1875	8	2
1830	136	50	1853	4	2	1876	15	4
1831	143	32	1854	11	6	1877	9	2
1832	156	12	1855	12	5*	1878	12	1
1833	135	31	1856	7	......	1879	21	1
1834	148	44	1857	9	4	1880	21	4
1835	142	40	1858	9	1	1881	6	2
1836	79	26	1859	10	7	1882	14	3
1837	90	12	1860	11	5*	1883	9	1
1838	130	19	1861	32	2	1884	8	2
1839	53	22	1862	18	6	1885	11	3
1840	13	8	1863	16	6	1886	22	2
1841	27	18	1864	5	2	1887	4	4
1842	47	13	1865	10	3	1888	17	2
1843	22	8	1866	20	6	1889	4	3*
1844	27	8*	1867	19	4	1890	2	1
1845	15	3	1868	13	5	1891	6	3
1846	11	1	1869	6	......			
1847	10	6	1870	3	......			

* One female.

During the sixty-seven years embraced in the table just given, 2,309 persons were sentenced to death, and of these, 1,736 were

Convictions and executions.

condemned during the first eighteen years. For the whole period the executions numbered 629, of which 466 were carried out during the first eighteen years.

Effect of capital punishment.

A study of the statistics of judicial executions in New South Wales prior to the year 1842 will make it abundantly plain that the barbarous system of taking life for insufficient cause, so far from striking terror into the hearts of would-be criminals, had the effect of lowering the moral tone of the whole community, and, therefore, of making some of its members more prone to commit the very offences which the punishment was intended to prevent. The death penalty is now awarded to murder, attempt to murder, and rape, and the following statement shows the number of convictions and executions for those offences for a period of twenty-one years:—

Year.	Murder and Attempt at Murder.		Rape.		Attempts at Rape. (Convictions.)
	Convictions.	Executions.	Convictions.	Executions.	
1871	9	3	2	......	2
1872	14	3	5	......	4
1873	9	4	1	......	3
1874	7	2	7	1	10
1875	7	1	1	1	4
1876	12	4	3	......	3
1877	4	2	5	......	......
1878	8	1	4	......	3
1879	16	......	5	1	3
1880	15	4	6	......	......
1881	3	1	3	1	6
1882	10	3	4	......	3
1883	8	1	1	......	3
1884	7	2	1	......	......
1885	9	3	2	......	......
1886	10	2	12	......	9
1887	3	......	1	4*	......
1888	15	2	2	......	......
1889	3	3	1	......	......
1890	2	1	1	......	1
1891	5	3	1	......	......

* Mount Rennie case; convicted in 1886.

Executions for rape.

The last execution for rape took place shortly after the close of the year 1886, when four youths were hanged. Since then, as shown by the table just given, there have been only six capital convictions for this offence. It would be rash to argue that the executions of five years ago have exercised a salutary effect upon persons disposed to commit this offence, for there has been no diminution in the number of persons committed for trial. With more reason it might be assumed that juries are loth to convict for rape, knowing that death is the penalty assigned by law as its punishment.

GAOLS.

Gaol accommodation.

There are in New South Wales 60 gaols of all kinds; of these 7 are principal gaols, 15 minor gaols, and 38 police gaols. There is accommodation for 1,774 prisoners in separate cells, and for 4,542 when more than one prisoner sleeps in a cell. On the 31st December, 1891, there were 2,616 prisoners in confinement, thus distributed:—

Prisons.	Prisoners.	Accommodation—one prisoner per cell.	Accommodation—more than one prisoner per cell.
Principal Gaols	1,887	1,291	2,911
Minor Gaols	515	274	874
Police Gaols	214	209	757
Total	2,616	1,774	4,542

Decrease of prisoners.

The total number of prisoners received under sentence into the various gaols throughout the Colony during the year 1891 was 12,810—a lesser number than in any year in the table, the year 1890 alone excepted. Of these, 5,249 were received at Darlinghurst Gaol, Sydney. The following table gives the number of prisoners received into gaol under sentence for the last ten years:—

Year.	Males.	Females.	Total.
1882	10,326	3,918	14,244
1883	11,309	4,096	15,405
1884	12,836	4,161	16,997
1885	13,045	4,324	17,369
1886	12,650	4,382	17,032
1887	11,554	3,728	15,282
1888	10,519	3,712	14,231
1889	9,299	3,583	12,882
1890	9,203	3,084	12,287
1891	9,553	3,257	12,810

Prisoners in confinement.

The average number of persons in confinement during the year has not been ascertained, but the number in detention at the close of each year is known, and the figures for ten years will be found in the following statement. Taking one year with another, these figures may be accepted as fairly representing the average daily number for each year given. Prisoners have been classified under two heads—those under sentence, and those awaiting trial. The respective numbers of each of these classes for the period named were:—

Year.	Total persons in confinement.	Males.	Females	Under sentence.			Awaiting trial.		
				Males.	Females	Total.	Males.	Females	Total.
1882	1,935	1,646	289	1,497	274	1,771	149	15	164
1883	2,168	1,826	342	1,684	330	2,014	142	12	154
1884	2,464	2,115	349	1,966	337	2,303	149	12	161
1885	2,559	2,222	337	2,084	328	2,412	138	9	147
1886	2,501	2,119	382	2,018	369	2,387	101	13	114
1887	2,380	2,053	327	1,919	316	2,235	134	11	145
1888	2,353	2,044	309	1,931	301	2,232	113	8	121
1889	2,370	2,048	322	1,932	313	2,245	116	9	125
1890	2,425	2,143	282	2,023	269	2,296	120	13	129
1891	2,616	2,325	291	2,204	285	2,489	121	6	127

Classification of offences.

The prisoners under sentence may be roughly divided into two classes, according to the description of offence for which they were convicted, as in the following table. It must, however, be admitted that the line dividing felonies from misdemeanours is very ill-defined :—

Year.	Under sentence for—				Total under sentence.		
	Felony.		Misdemeanour.				
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1882	844	25	653	249	1,497	274	1,771
1883	802	47	882	283	1,684	330	2,014
1884	949	33	1,017	304	1,966	337	2,303
1885	1,047	33	1,037	295	2,084	328	2,412
1886	1,070	40	948	329	2,018	369	2,387
1887	1,024	30	877	286	1,901	316	2,217
1888	987	27	935	274	1,922	301	2,223
1889	1,051	29	869	284	1,920	313	2,233
1890	1,073	27	947	245	2,020	272	2,292
1891	1,120	35	1,084	250	2,204	285	2,489

Felons under sentence.

The number of felons detained under sentence was larger in 1886 and 1891 than in any other year of the series, and, although the figures of 1891 are very little above those of the previous year, it will be seen that a notable increase has taken place since 1882. This advance does not denote an increase in crime—for, as already shown, serious crime is decreasing in the community—but points rather to longer sentences. The increase in the term served by prisoners is due to the Criminal Law Amendment Act, which came into force on the 1st day of July, 1883. By the provisions of that Act in very many cases a minimum sentence was imposed which the Judges had not power to reduce. More recently, however, an Amending Act has been passed, by which the Judges are enabled to exercise greater discretion in the way of leniency in cases where they are of opinion that the circumstances render it expedient that they should do so.

The following table shows the average time served by each prisoner sentenced for felony :—

Year.	Average sentence.	Year.	Average sentence.
	Years.		Years.
1882	1·22	1887	1·60
1883	1·20	1888	1·43
1884	1·40	1889	1·21
1885	1·72	1890	1·34
1886	1·48	1891	1·32

Ages of prisoners in gaols.

As in the case of the arrests, the largest number of prisoners at any age-period are those whose ages range from 25 to 30 years; but, proportionately to the numbers of the population, the ages of middle life, namely, from 30 to 50 years, are most productive of criminals. The following table gives the number and ages of persons sentenced to labour or imprisonment, during the year 1891. Two of the males sentenced to death had the sentence commuted :—

Ages.	To Death.	Sentenced to Imprisonment.						Total Prisoners Sentenced.		
		With Labour.			Without Labour.					
	Males.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Under 10 years	...	1	...	1	4	...	4	5	...	5
10 and under 15	...	39	1	40	44	3	47	83	4	87
15 ,, 20	2	264	85	349	333	83	416	599	168	767
20 ,, 25	...	485	104	589	591	312	903	1,076	416	1,492
25 ,, 30	...	880	147	1,027	1,129	472	1,601	2,009	619	2,628
30 ,, 35	2	572	122	694	899	441	1,340	1,473	563	2,036
35 ,, 40	...	377	94	471	662	358	1,020	1,039	452	1,491
40 ,, 45	..	306	91	397	647	341	988	953	432	1,385
45 ,, 50	...	201	43	244	528	173	701	729	216	945
50 ,, 55	...	183	34	217	392	123	515	575	157	732
55 ,, 60	1	118	24	142	240	94	334	359	118	477
60 and upwards	1	212	24	236	440	88	528	653	112	765
Totals	6	3,638	769	4,407	5,909	2,488	8,397	9,553	3,257	12,810

Number of persons convicted.

Taking the returns from all the gaols, it will be found that 8,791 distinct persons were convicted during the year 1891, of whom 7,407 were males, and 1,384 were females. The following tables show the number of distinct persons of each sex in age groups who were convicted once and more than once during 1891, any convictions they may have undergone in previous years being disregarded. The above total differs from that returned by the Comptroller-General of Prisons, which in 1891 was 11,265, the reason being that the latter figure includes persons awaiting trial, on remand, or in confinement for other reasons. In the figures given herewith the returns from all the gaols have been combined, and each person is debited with the total number of sentences received, whether served in one or several prisons :—

Ages.	Males Convicted during 1891, with Ages and Number of Times Convicted.															
	1	2	3	4	5	6	7	8	9	11	12	13	15	21	22	Total.
7	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
8	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
9	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
10	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
11	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8
12	13	2	...	...	...	...	...	...	...	...	...	...	...	...	...	15
13	12	1	...	...	...	...	...	...	...	...	...	...	...	...	...	13
14	27	6	...	...	...	...	...	...	...	...	...	...	...	...	...	33
15	54	3	...	...	...	...	...	...	...	...	...	...	...	...	...	57
16	68	4	3	...	...	...	...	...	...	...	...	...	...	...	...	75
17	79	9	4	1	...	...	...	...	...	...	...	...	...	...	...	93
18	119	10	3	1	...	...	...	...	...	...	...	...	...	...	...	133
19	145	14	4	1	...	...	...	...	...	...	...	...	...	...	...	164
20	120	18	5	2	...	1	...	...	1	...	...	...	...	...	...	147
21	163	25	7	2	...	...	...	...	...	...	...	...	...	...	...	197
22	154	20	4	1	...	1	...	...	...	...	...	...	...	...	...	180
23	157	19	9	...	...	...	1	...	...	...	...	...	...	...	...	186
24	140	20	5	...	...	...	...	...	...	...	...	...	...	...	...	165
25 and under 30	1,337	183	51	12	8	3	2	...	1	1	...	1	...	...	...	1,599
30 ,, 35	936	137	31	17	6	4	3	...	...	...	1	..	1	...	...	1,136
35 ,, 40	675	98	26	10	4	5	...	...	...	...	...	...	...	...	...	818
40 ,, 45	578	85	28	11	5	...	2	1	1	...	...	...	...	1	...	712
45 ,, 50	428	68	26	10	5	...	2	1	...	...	...	...	...	...	...	540
50 ,, 55	324	53	24	6	3	2	2	1	...	...	...	...	...	...	...	415
55 ,, 60	214	27	10	6	2	2	1	1	...	...	...	...	...	...	...	263
60 ,, 65	185	22	10	3	4	...	...	2	1	1	...	...	...	...	...	228
65 ,, 70	79	12	6	1	2	1	...	...	...	...	...	...	...	...	...	101
70 ,, 75	61	6	1	...	1	...	1	...	...	...	...	...	...	...	1	71
75 ,, 80	25	3	1	1	1	...	...	...	...	...	...	...	...	...	...	31
80 and over	11	4	...	...	...	1	1	...	...	...	...	...	...	...	...	17
Total	6,122	849	258	85	41	20	15	6	4	2	1	1	1	1	1	7,407

Juvenile offenders.

These figures disclose some interesting facts. It is sad to see that ten boys 10 years and under had to be sent to gaol, as well as the large number of 126 between the ages of 10 and 15; but it is well known that the problem of dealing with juvenile offenders is one of the most serious and embarrassing that the magistrates have to cope with, especially as there is no Reformatory in the Colony to which boys of the criminal class can be sent. In the absence of such an institution, the magistrates, unwilling to subject boys of tender age to the contaminating influences of a gaol, generally ignore the criminal charges and send them to the nautical school-ship "Vernon," as deserted or neglected children. This, though the lesser of two evils, is manifestly unfair to the class of children for whom the "Vernon" was primarily intended, and must largely increase the difficulties of its management. Some few years ago extensive buildings were erected at Rookwood for the accommodation of criminal boys, but up to the present time they have remained untenanted. An announcement, however, has been made, that this building will be devoted to the original purpose of a Reformatory, and will be opened at no distant date.

Reconvicted prisoners.

A remarkable feature of the foregoing table is the large number of persons sent to gaol more than once during the year. The prisoners with two or more convictions numbered 1,285, while their convictions were 3,341. The list of second convictions commences with a child of 12 years and ends with an old man of over 80; the third convictions are headed by a lad of 16, and so on, as the list shows. The number of persons of 20 years and under convicted of offences was 748, and of these 92 were convicted more than once.

Females imprisoned.

There were 1,384 females imprisoned during the year 1891, of whom the large proportion of 584, or 43 per cent., were convicted more than once. The convictions of girls of 20 years and under numbered 156, and of these more than one-third were imprisoned more than once. One unfortunate, between 25 and 30 years of age, had the astonishing record of twenty-seven imprisonments during the year. The following table shows the number of females imprisoned, their ages, and number of convictions during the year :—

Ages.	Females Convicted during 1891, with Ages and Number of times Convicted.																			
	1	2	3	4	5		7	8	9	10	11	12	13	14	15	16	17	18	27	Total.
12	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
14	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
15	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
16	6	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8
17	12	6	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	20
18	17	7	3	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	31
19	31	10	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	45
20	26	8	8	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	45
21	22	7	3	5	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	39
22	38	8	5	2	...	1	1	...	1	...	...	1	...	...	...	...	...	...	...	57
23	18	7	6	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	35
24	22	5	3	...	2	...	2	...	1	...	...	...	...	...	...	...	...	...	...	35
25 and under 30	156	42	13	7	10	5	5	3	3	4	1	1	2	...	2	...	...	...	1	255
30 ,, 35	118	36	19	9	7	11	7	2	1	4	2	1	...	1	...	...	1	...	...	219
35 ,, 40	85	34	9	4	9	4	2	6	2	5	1	...	...	2	...	...	...	1	...	164
40 ,, 45	79	22	15	7	7	8	8	3	...	3	...	...	1	1	...	1	...	...	...	155
45 ,, 50	50	15	9	3	1	2	...	4	1	1	...	...	...	1	1	...	...	...	...	88
50 ,, 55	49	11	5	2	3	2	1	1	1	...	...	1	...	...	...	...	...	...	...	76
55 ,, 60	23	5	5	1	4	1	...	2	...	...	...	2	...	...	...	...	...	...	...	43
60 ,, 65	25	3	2	2	2	...	...	...	...	1	...	...	...	...	...	...	...	...	...	35
65 ,, 70	7	2	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	11
70 ,, 75	8	5	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14
75 ,, 80	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Total ...	800	236	107	52	52	36	26	21	10	18	4	7	3	5	3	1	1	1	1	1,384

Reformatory for girls.

There is a Reformatory for girls at Shaftesbury, near the South Head of Port Jackson, where girls under 16 years of age, who have fallen into crime, may be detained; nevertheless, seven girls under this age found their way to prison during the year 1891. The Shaftesbury Reformatory received nine inmates during the year, in addition to thirty-two in the institution at the close of the previous year, making a total of forty-one, of whom, however, nine were discharged, so that at the close of 1891 there remained a total of thirty-two. An Industrial School for girls is maintained at Parramatta, but it is not intended for criminal children, and will be dealt with under the head of charitable institutions.

Length of sentences.

The punishments awarded to offenders vary from nominal imprisonment to the supreme penalty of death. The following summary gives a classification for 1891 according to the length of the sentences and the nature of the offences, with references to male offenders only. It should be noticed that whereas the two previous tables show the number of distinct persons sentenced, the figures in the two following statements refer to the number of offences punished, the same person in some instances having been sentenced several times in the course of the year :—

Classification of Offences.	Total Offences.	Length of Sentences.											
		2 days and under.	3 days and under 1 week.	1 week and under 1 month.	1 month and under 6.	6 months and under 12.	1 year and under 2.	2 years and under 5.	5 years & under 10.	10 years & under 15.	Until order complied with, &c.	Term of Natural Life.	Death.
Offences against the person	958	6	4	177	467	81	64	59	17	6	69	2	6
Offences against property with violence	225	4	3	64	71	26	9	31	16	1	...	...	...
Offences against property without violence	1,832	13	8	246	953	350	98	136	26	...	2	...	...
Forgery and offences against the currency	53	..	...	...	4	9	9	21	10	...	...	...	...
Offences against good order	5,738	1,139	542	2,762	1,175	118	1	...	...	...	1	...	...
Offences not included in the preceding ...	747	55	63	393	202	18	8	3	2	...	3	...	...
Total offences committed by Males	9,553	1,217	620	3,642	2,872	602	189	250	71	7	75	2	6

Sentence of death.

It will be seen that the sentence of death was passed on six persons; in three cases it was carried out, and in the other three it was commuted to imprisonment for life, the offences being murder, or attempted murder. Besides the three cases just mentioned, there were two other cases in which imprisonment for life was the penalty awarded.

Females imprisoned.

The classification of sentences and nature of offences for which females suffered imprisonment in 1891 is given below. In thirty-nine cases only, out of 3,257, did the length of sentence exceed one year. The terms for which women are sentenced are much shorter than those of males, as their offences, generally speaking, are much lighter :—

Classification of Offences.	Total Offences.	Length of Sentences.							
		2 days and under.	3 days and under 1 week.	1 week and under 1 month.	1 month and under 6.	6 months and under 12.	1 year and under 2.	2 years and under 5.	5 years and under 10.
Offences against the person	84	4	3	32	36	2	4	3	...
Offences against property with violence..............	74	1	..	35	33	1	1	2	1
Offences against property without violence	204	4	...	34	113	29	11	13	...
Forgery and offences against the currency	...	...	...	...	...	...	...	...	...
Offences against good order	2,880	250	158	1,734	634	101	3	...	...
Offences not included in the preceding..............	15	1	1	7	5	...	...	1	...
Total offences committed by Females.........	3,257	260	162	1,842	821	133	19	19	1

Habitual criminals.

Allusion has already been made to the number of persons with more than one conviction recorded against them during 1891. It would be of interest to compare these figures with the records of previous years, but unfortunately those prior to 1889 are not entirely reliable, and are therefore omitted from the following table, which includes also a statement of the average nnmber of offences committed by each person confined:—

Year.	Prisoners sent to Gaol more than once.		Offences Committed.		Average number of Offences Committed.	
	Males.	Females.	Males.	Females.	Males.	Females.
1889	1,224	663	3,126	2,539	2·6	3·8
1890	1,196	565	3,165	2,201	2·7	3·9
1891	1,285	584	3,431	2,457	2·7	4·2

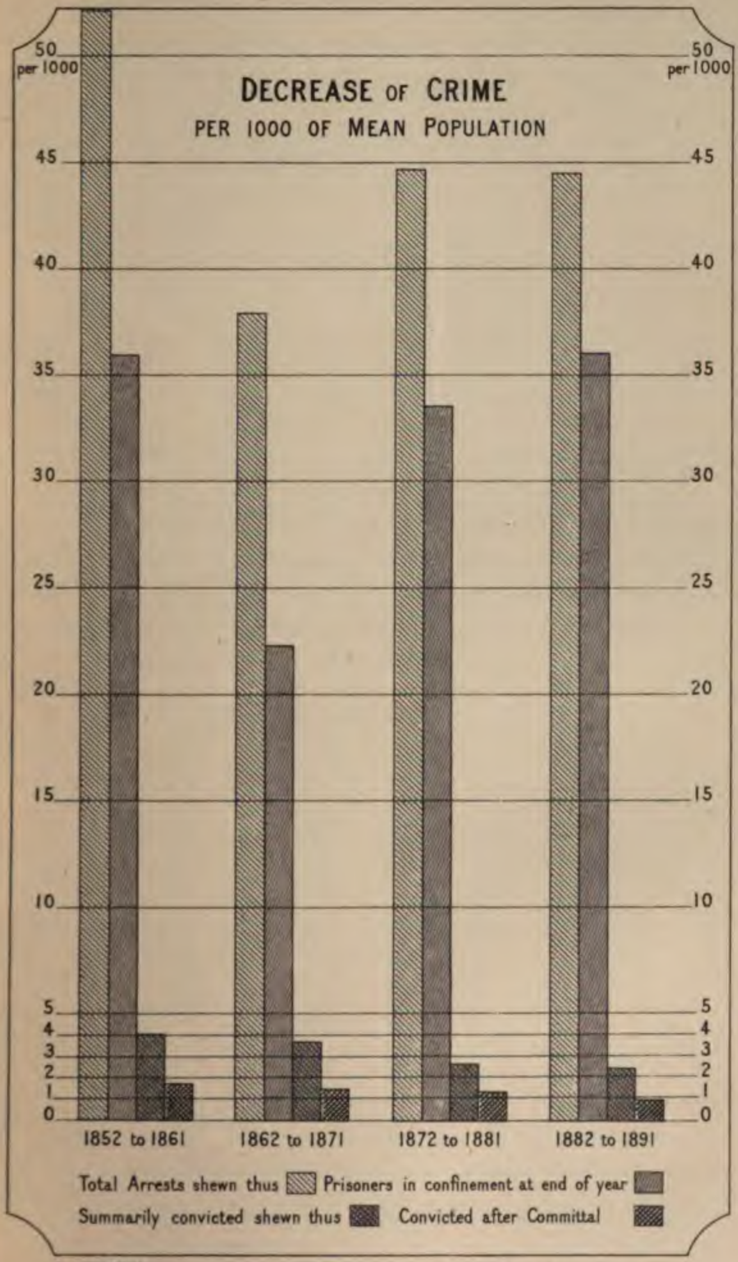
Reconvicted prisoners.

From the evidence of the above table there would appear to be a constant reappearance of the same faces before the Courts to account for so high an average of reconvictions. The proportion of habitual offenders, if those with previous convictions may be so termed, is remarkable, and will perhaps be better illustrated by the following table than even by the one just given. The returns, which are approximate only, in each case only include convictions within the year named, convictions in a previous year being disregarded :—

Year.	Percentage of prisoners with previous convictions sent to gaol.	Year.	Percentage of prisoners with previous convictions sent to gaol.
1882	33·4	1887	25·4
1883	28·3	1888	25·3
1884	26·2	1889	22·5
1885	27·0	1890	22·2
1886	26·4	1891	21·3

A return is furnished annually by the Comptroller-General of Prisons, showing the number of persons committed to gaol each year who had been previously convicted, whether for that year or previous years. The table has been sub-divided into—1st class or graver offences carrying 5 years and over, 2nd class or under 5 years sentence, while the 3rd class includes those who were sentenced to imprisonment only. The number in each class for the ten years ending 1891 was :—

Year.	Sentence, 5 years and upwards.			Sentence, less than 5 years.			Sentence, imprisonment only.		
	Second conviction.	Third conviction.	Fourth, or more.	Second conviction.	Third conviction.	Fourth, or more.	Second conviction.	Third conviction.	Fourth, or more.
1882	16	5	12	231	82	93	152	38	85
1883	53	4	9	257	50	64	75	20	31
1884	35	10	46	136	72	57	86	29	37
1885	20	19	29	133	81	72	101	38	35
1886	23	10	23	108	43	115	93	31	51
1887	18	6	28	113	52	74	79	13	20
1888	16	17	35	136	66	113	76	40	40
1889	18	14	54	266	104	97	119	54	24
1890	17	10	50	217	94	120	186	72	81
1891	16	11	24	208	87	138	87	45	35


DECREASE OF CRIME
PER 1000 OF MEAN POPULATION

3bb 183-92 (a)
PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

Distinct persons committed.

The number of distinct persons committed to gaol under sentence for the past ten years is given in the following table. The number fluctuated considerably during the period under review, but there is ample evidence in this table, taken in conjunction with that on page 417, showing trials, &c., in the superior courts, that crime is steadily diminishing:—

Year.	Persons.	Year.	Persons.
1882	9,618	1887	9,046
1883	10,793	1888	10,096
1884	12,264	1889	8,827
1885	12,429	1890	7,939
1886	11,474	1891	8,791

Refractory prisoners.

The chief punishment inflicted on refractory prisoners is solitary confinement. Formerly other modes of punishment were equally used, but of late years these have been to a large extent superseded. The number of punishments inflicted upon refractory prisoners is given as follows:—

Year.	Prisoners punished in gaols.			Percentage of total prisoners punished.
	Solitary confinement.	Other punishment.	Total.	
1882	1,133	319	1,452	10·2
1883	1,249	268	1,517	9·8
1884	1,473	436	1,909	11·2
1885	1,435	399	1,834	9·3
1886	1,420	389	1,809	9·2
1887	1,445	416	1,861	10·5
1888	1,302	246	1,548	9·3
1889	1,195	331	1,526	10·0
1890	1,458	266	1,724	11·8
1891	1,235	304	1,539	10·1

Debtors.

There were forty-five persons imprisoned for debt during the year 1891. As the time of detention as a rule only extended for short periods, the number of debtors in confinement at any one time was not large, and on the 31st December, 1891, there were no persons in gaol for debt. The figures for the last ten years will be found in the following table:—

Year.	Male.	Female.	Total.	Year.	Male.	Female.	Total.
1882	44	1	45	1887	48	2	50
1883	27	1	28	1888	56	1	57
1884	61	3	64	1889	71	1	72
1885	50	2	52	1890	59	2	61
1886	61	1	62	1891	45	...	45

Employment of prisoners.

The following table gives the number of the prisoners employed in the several gaols at the end of 1891, and those engaged in the principal callings. In some of the gaols there are no means of finding suitable employment of a profitable or useful nature, otherwise the numbers shown could be very much increased; but it also must be considered that there are many prisoners whose services are not available for labour, such as those whose sentence does not carry hard labour, and those exempt from work on account of medical and other reasons. The net value of the labour done during 1891 amounted to £48,364:—

Carpenters and assistants	40
Painters	24
Blacksmiths and assistants	34
Tinsmiths	20
Masons	5
Stonecutters	28
Labourers	258
Brushmakers	11
Matmakers	90
Shoemakers	113
Tailors	117
Bookbinders	32
Writers	23
Washing...	88
School assistants	18
Hospital attendants	28
Barbers	17
Needlework	109
Other employments	808
Total employed	1,863

Besides the foregoing, there were at the close of the year 1891 s many as 539 persons who were not employed; the reasons for uch exemption will be found in the following statement:—

In hospitals	49
In cells	17
Under separate treatment	188
Under medical treatment	37
Exempt from work	162
Delegates...	14
Keeping themselves	4
Incapable...	39
Received too late to be set to work	29
	539

Deaths in gaols.

The death-rate in gaols is very light, when the neglected state i which many of the prisoners are received is considered, and ioreover shows signs of decreasing. No common ground of comarison exists between the death-rate in gaols and that of the eneral population. In the following table the number of deaths given for 1875 and subsequent periods, together with the eath-rates per 1,000 of all prisoners received under sentence uring each year, and this includes those whose term had not pired at the close of the previous year:—

Year.	Deaths.			Death-rate per 1,000 persons under sentence. (Both sexes.)
	Male.	Female.	Total.	
1875	34	8	42	3·98
1880	37	...	37	2·38
1885	39	11	50	2·52
1886	38	10	48	2·45
1887	30	8	38	2·14
1888	30	5	35	2·11
1889	32	3	35	2·30
1890	24	3	26	1·77
1891	37	2	40	2·62

Cost of police and gaols.

The following table shows the amount spent in maintenance for the police services and gaol establishments during the last five years, and also the net return from prison labour :—

Year.	Expenditure.			Net Value of Prison Labour.	Net Expenditure.	
	Police.	Gaols and Penal Establishments.	Total.		Total.	Per Inhabitant.
	£	£	£	£	£	£ s. d.
1887	273,087	124,778	397,865	42,017	355,848	0 7 1
1888	275,092	126,253	401,345	38,243	363,102	0 7 0
1889	291,249	144,142	435,391	42,317	393,074	0 7 4
1890	288,823	139,491	428,314	42,406	385,908	0 7 0
1891	308,887	137,341	446,228	48,364	397,864	0 6 11

THE SUPREME COURT—CIVIL JURISDICTION.

Judges of the Supreme Court.

The chief legal tribunal of the Colony is the Supreme Court, which is at present composed of seven judges—that is, one Chief Justice, and six puisne Judges. Civil actions are usually tried by a jury of four persons, but either party to the suit, on cause shown, may apply to a Judge in Chambers to have the cause tried by a jury of twelve. Twice the number of jurors required to sit on the case are chosen by ballot, from a panel summoned by the Sheriff, and from that number each of the parties strikes out a fourth, the remainder thus selected by both parties forming the jury who are to try the case. This jury are constituted the judges of the facts of the case only, being bound to accept the dicta of the Judge on all points of law. From the court thus constituted an appeal lies to what is called the "Full Court," sitting *in Banco*, which is generally composed of at least three of the Judges. The Chief Justice, or in his absence the senior puisne Judge, presides over the Full Court, which gives its decision by majority. The circum-

The Full Court.

stances under which new trials are granted are:—Where the Judge has erroneously admitted or rejected material evidence; where he has wrongly directed the jury on a point of law; where the verdict of the jury is clearly against evidence; or where, from some other cause, there has evidently been a miscarriage of justice.

Appeal to Privy Council permitted.

Provision is made for appeals to the Privy Council, but any suitor wishing to carry his cause before the supreme tribunal of the Empire must first obtain leave so to do from the Supreme Court. The amount in dispute must be at least £500, or affect the construction of a New South Wales statute. In other cases application for leave to appeal must be made to the Privy Council itself.

Vice-Admiralty Court.

The Chief Justice has also an extensive jurisdiction as Commissary of the Vice-Admiralty Court, in which all cases arising out of collisions, &c., in Australian waters, are determined.

Equity jurisdiction.

One of the puisne Judges also acts as judge of the Equity Court, from whose decrees an appeal lies to the Full Court, and thence to the Privy Council.

Bankruptcy.

Affairs in Bankruptcy are also dealt with by a puisne Judge, assisted by the Registrar. An appeal can be made to the Full Court against the Judge's decision.

Divorce Court.

Another puisne Judge presides over the Divorce Court, in which cases are usually tried without a jury, an appeal lying to the Supreme Court.

Ecclesiastical jurisdiction.

The equity Judge also represents the ecclesiastical jurisdiction of the Supreme Court, and hears and decides all applications for the probate of wills, and for letters of administration, and also determines suits as to the validity, &c., of wills. Motions for rehearing cases, adjudicated in this court, are sometimes made before the Supreme Court or Privy Council. Barristers only had the right of audience before the Supreme Court until March, 1892, when an Act was assented to extending the privilege to solicitors.

Civil suits.

The following table gives the number of civil suits decided in the Supreme and Circuit Courts in each year from 1882 to 1891, inclusive:—

Year.	Writs issued.	Causes decided.	Defended.	Undefended or settled.	Total amount for which judgment signed.
					£
1882	3,161	414	250	164	169,520
1883	3,830	377	225	152	....
1884	4,547	493	271	222	370,648
1885	4,079	494	255	239	399,952
1886	5,649	503	255	248	410,275
1887	5,149	478	223	255	457,704
1888	4,636	583	306	277	393,976
1889	6,408	599	300	299	690,753
1890	5,951	589	460	129	751,825
1891	6,144	532	289	243	537,231

During the last ten years only 35 civil cases have been tried before juries of twelve out of 2,834 trials in the Supreme and Circuit Courts during that period, and for the last two years all the civil transactions have been before juries of four only.

TESTAMENTARY AND EQUITY JURISDICTION.

Probates and letters of administration.

The number of probates and letters of administration in connection with wills for each year, of the same period, is given in the next table:—

Year.	No. of probates and administrations—Wills annexed.	Amount sworn to.	No. of letters of administration.	Amount sworn to.	Total
		£		£	£
1882	810	3,586,554	589	581,528	4,168,082
1883	862	3,528,602	613	588,029	4,116,631
1884	933	3,642,709	648	605,543	4,248,252
1885	961	3,721,805	659	601,542	4,323,347
1886	1,026	4,726,918	706	768,628	5,495,546
1887	961	3,621,874	665	641,426	4,263,300
1888	998	3,652,963	667	638,295	4,291,258
1889	1,115	4,317,734	682	473,611	4,791,345
1890	1,131	6,605,545	680	922,577	7,578,122
1891	1,192	4,734,228	767	722,568	5,456,796

DISTRICT COURTS.

Minor civil causes.

District Courts have been established for the trial of civil causes where the value in dispute does not exceed £200. They are presided over by Judges specially appointed for the purpose, who also perform the duties of Chairmen of Quarter Sessions, in which capacity they are competent to try all prisoners except such as are charged with capital crimes. District Courts sit ten months during the year in the metropolis, and are held twice a year in all considerable country towns. The Judge is not ordinarily assisted by a jury, but in cases where the amount in dispute exceeds £20, either of the parties may, by giving notice to the Registrar of the Court, have a jury summoned. On questions of law an appeal lies to the Supreme Court.

Suits in District Courts.

The number of suits in the District Courts of the Colony, and the mode in which they were tried, whether with or without jury, &c., is given in the following table for the judicial year terminating the last day of February, 1892 :—

District.	Number of suits.		Settled.		Number of cases tried.		Result of the trials.	
	Commenced.	Total amount sued for.	Without hearing.	By arbitration.	By jury.	Without jury.	For plaintiffs.	For defendants.
		£						
Metropolitan and Hunter..	7,818	162,562	4,388	4	37	3,068	2,845	260
Southern	1,278	33,435	527	2	17	679	608	88
South-western.	1,140	41,877	451	3	13	584	532	65
Western	933	24,842	451	2	3	393	353	43
Northern	1,881	55,229	791	...	18	947	850	115
North-western.	444	17,583	209	...	5	198	191	12
Total	13,494	335,528	6,817	11	93	5,869	5,379	583

The costs of the above-mentioned suits in the District Courts amounted to £25,937.

DIVORCE COURT.

Prior to the passing of the Matrimonial Causes Act of 1873, the Supreme Court of New South Wales had no jurisdiction in

Grounds for divorce

divorce. The chief grounds of divorce under this Act were adultery since marriage on the part of the wife, and adultery and cruelty on the part of the husband. At the latter end of 1891 an Amending Act was passed by Parliament, and which was assented to in May of the following year. Under the new Act the conditions for obtaining divorce have been extended, as, in addition to the grounds mentioned above, divorces may now be granted on both sides for desertion for over three years, habitual drunkenness, habitual cruelty and neglect, imprisonment for over three years and still in prison on commuted capital sentence or under penal servitude for seven years, conviction within one year previously of attempt to murder, or assault with intent to commit grievous bodily harm, assault or cruel beating, and in the case of the husband, five years frequent conviction for crime and habitually leaving wife without support. The number of decrees obtained for dissolution of marriage, with those for judicial separation since the Supreme Court had jurisdiction in divorce, was as follows :—

Year.	Decrees.		
	Dissolution of Marriage.	Judicial Separation.	Total.
1874	1	....	1
1875	9	....	9
1876	19	1	20
1877	19	....	19
1878	11	....	11
1879	10	....	10
1880	22	1	23
1881	15	....	15
1882	19	....	19
1883	14	1	15
1884	27	8	35
1885	23	4	27
1886	32	4	36
1887	25	3	28
1888	28	5	33
1889	44	8	52
1890	42	9	51
1891	50	17	67

During the last ten years 500 petitions for dissolution of marriage were received, of which number 304 were granted; in same period, 61 petitions for judicial separation were applied for, of which 59 were granted. The number of divorces and judicial separations per 10,000 marriages in New South Wales for quinquennial periods is given below:—

Period.	Per 10,000 Marriages.		
	Divorces.	Judicial Separation.	Divorces and Judicial Separation.
1874-78	24·7	0·4	25·1
1879-83	25·3	0·6	25·9
1884-88	35·2	6·3	41·5
1889-91	57·1	14·3	71·4

BANKRUPTCY COURT.

Bankrupt debtors.

The statutes relating to bankrupt debtors are administered by the Supreme Court, and the jurisdiction is exercised by a Judge thereof, called the Judge in Bankruptcy, who may on occasion delegate certain of the powers vested in him to the Registrar of Bankrupt Estates. When any person becomes embarrassed, and is unable to pay his debts, the law allows him to sequestrate his estate for the benefit of his creditors, or these latter may, under certain specified circumstances, apply for a compulsory sequestration. An officer of the Court, termed an official assignee, is appointed by the Judge to manage each sequestrated estate. His duties are to realise the bankrupt's assets, and pay *pro rata* the debts proved, subject to the approval of the Judge. After each bankrupt's case has been investigated, and all dividends have been

Sequestration of estates.

paid, the Judge may at his discretion grant a certificate relieving the bankrupt from all future liability. This certificate is granted in all cases where no blame has been found to attach to the applicant; but where the bankruptcy has been brought about by recklessness or fraud, it is often withheld for some time, and, in very bad cases, refused entirely. An appeal from the decision of the Judge may be made on the same terms and in similar mode as is provided in respect to an order, decision, or ruling of a Judge of the Supreme Court, and by the rules of Court the Judge from whose decision an appeal has been made may not sit to hear such appeal. The number of applications made to the Full Court against the ruling of the Bankruptcy Court for the last ten years was 37.

The number of bankrupts, and the amounts for which they failed, and other particulars will be found in the chapter of this volume relating to finance.

PART XIV.

Local Government.

Introduction of the municipal system.

PRIOR to the year 1842 municipal institutions did not exist in the Colony. In that year an Act was passed to establish the Municipal Council of the city of Sydney, and an election of aldermen and councillors took place on the 9th November. Mr. John Hosking was the first Mayor. The city was at first divided into six wards, but at a subsequent adjustment the number was increased to eight, as at present. The boundaries of the city are still the same as then laid down. After a few years great dissatisfaction arose in the minds of the citizens in regard to the manner in which the affairs of the Council were carried on, and a Select Committee of the Legislative Council was appointed in 1849 to inquire into the matter, who reported in favour of the abolition of the Municipal Council, with a recommendation that its powers should be vested in three Commissioners to be appointed for that purpose. This was not carried into effect until 1853, when the Corporation was dissolved, and its powers were handed over to Messrs. G. Elliott, J. Rae, and F. Darvall, who as a Commission exercised them from the beginning of 1854 to the end of 1857. The new Municipal Council of Sydney came into existence at the beginning of 1858. Mr. George Thornton was the first Mayor under the new order of things, and there were altogether sixteen aldermen, two for each ward. Since then the number of aldermen has been increased to twenty-four, each ward having three representatives.

Incorporation of Sydney.

Extension of Municipalities.

The necessity for extending the system of municipal government to the suburbs and country districts soon became apparent, but it was not until 1858 that a comprehensive measure was passed. Under this Act thirty-five districts were incorporated, all of which still exist. In 1867 the Municipalities Act was passed, which is yet in force. Its provisions are extremely liberal, but no district, however populous, is compelled to take advantage of them, and it is only by consent of a majority of the prospective ratepayers that a new municipality can be formed. By the Act of 1867 contiguous districts, with an area of not more than 9 square miles, and a population of not less than 1,000, may be incorporated as boroughs, and districts of not more than 50 square miles, with a population of not less than 500, may be formed into municipal districts. At the present time the Colony contains 165 incorporated districts, of which 67 are boroughs, and 98 municipal districts, the City of Sydney being styled a municipality. The area incorporated embraces only 2,426 square miles, equal to 0·78 per cent., or $\frac{1}{1}$ of the total area of the Colony. The population of New South Wales on the 5th April, 1891, was 1,132,234, or 3·65 to the square mile; in the municipalities there was a population of about 688,742, or an average density of 284 persons per square mile, or 200 times that of the rest of the Colony. The estimated value of land, houses, and other permanent improvements in the Colony may be approximately stated at £305,939,000; of this sum £151,491,000, which is obtained by adding 5 per cent. on the municipal returns, for undervaluation, was in the incorporate districts, and the balance in the other districts. Of course the value of unsold Crown lands is not included in this estimate.

Number of Municipalities.

Powers of Municipalities.

The powers and privileges conferred upon municipalities are extensive. In addition to maintaining the thoroughfares, the corporations are entitled to construct sewerage, water supply, and gas works, and to levy the necessary rates in connection therewith; to make and enforce by-laws for the maintenance of public health and the abatement of nuisances; to establish free public libraries and free infant schools; and to see the material and sanitary condition generally of the residents properly attended to. Under the Municipalities Act of 1867 assessors are appointed every year, and all municipal property is valued, and the councils are empowered to raise revenue by rates on the value so found, not exceeding 1s. in the £ for ordinary purposes, and not exceeding the same amount for special purposes. The amount of rate is calculated upon nine-tenths of the fair average rental of all buildings and cultivated lands, or lands which are, or have been, let for pastoral, mining, or other purposes, whether such land or buildings be actually in occupation or not, and upon 5 per cent. of the capital value of the fee-simple of all unimproved land. In the City of Sydney the Act directs that valuers shall be appointed from time to time to assess all ratable property within the city, and on the value of such assessment a city rate not exceeding 2s. in the £ may be levied. During the year 1891 the city rate was levied at the amount of 1s. 6d. in the £. The ordinary rate of 1s. in the £ was levied in all the suburban and country municipalities. There were 68 municipalities where lighting rates were imposed, in most cases of 3d. to 6d. in the £. The Boroughs of Moss Vale, Penrith, Redfern, Tamworth, and Young, are lit by electricity, the charge being 4d., 3d., 3d., 5d., and 6d. in the £ respectively. In only 21 municipalities is there a water rate, generally of 1s. in the £, though in some places the charge is by measurement. Other special rates, mostly for street-watering, are charged by some of the suburban boroughs.

The following table shows the capital value and assessment of Boroughs and Municipalities for the year 1891 :—

Boroughs and Municipal Districts.	Capital Value of		Total Amount of Ordinary Rates Assessed.	Fair Average Annual Value of	
	Buildings and Cultivated Land only.	All Ratable Property—Improved and Unimproved.		Buildings and Cultivated Land only.	All Ratable Property—Improved and Unimproved.
City of Sydney	55,716,900	55,716,900	167,151	2,785,846	2,785,846
Suburbs	40,714,700	51,174,200	147,895	2,704,876	3,227,851
Total, Metropolitan	96,431,600	106,891,100	315,046	5,490,722	6,013,697
Country	32,485,700	37,386,300	122,016	2,438,776	2,683,806
Total, N.S. Wales..	128,917,300	144,277,400	437,062	7,929,498	8,697,503

Capital value of all ratable property.

Out of the total capital value of property in all municipalities for 1891, the sum of £128,917,300 represents the capital value of improved lands, that is, of lands upon which buildings have been erected, or which are cultivated, or have been let for pastoral and other purposes; and £15,360,100, is the value of unimproved lands, classed as such for municipal purposes. The annual value is made up of the actual rental of improved lands, and 5 per cent. of the capital value of unimproved lands.

Metropolitan Water and Sewerage Rate.

No mention has been made of the rates charged in the city and suburbs of Sydney under the Metropolitan Water and Sewerage Act, since these are levied by the Board constituted under the Act mentioned and not by the municipalities. The rates charged by the Board for water are, 10s. per annum on premises assessed at £20 and under, and 6d. for every £ in the assessment up to £300. Over £300 a sliding scale comes into force. Vacant lands of the assessed value of £60 and over are charged at the rate of 2d. in the £ on the amount of their valuation. Various charges per annum are made for the use of water in certain trades and callings, and for the use of animals. Water is also supplied by measure at 1s. 6d. per 1,000 gallons. The scale of sewerage rates levied by the Board is as follows:—On every house, tenement, or land of £17 assessed annual value or under, 10s. per annum; and for those assessed above the amount mentioned, 7d. in the £. Vacant lands of the assessed annual value of £40 and over, a rate of 3d. in the £ is imposed.

Rates under Country Towns Water and Sewerage Act of 1880.

Municipalities which have availed themselves of the provisions of the Country Towns Water and Sewerage Act of 1880, are empowered, under clause 13 of the said Act, to levy a rate not exceeding a maximum of 5 per cent. on the assessed value of land and tenements in addition to the ordinary municipal rate. Such maximum rate is at present levied in seventeen municipalities, in ten of which the ratepayers are under a total contribution of 2s.; in four of 2s. 3d.; in two of 2s. 4d.; and in one of 2s. 6d. in the £ on the assessed value of their properties.

Indowment.

In order to aid municipalities in the difficulties surrounding their inception, the Act of 1867 provides for endowment being granted for a period of fifteen years. In each of the first five years after incorporation, every municipality is entitled to a sum equal to, but not exceeding, the whole amount actually raised by rates or assessments and subscriptions paid during the past year. In each of the next succeeding five years a sum equal to, but not exceeding, one moiety; and in each of the next succeeding five years a sum equal to one-fourth of the amount so paid. After the expiry of these fifteen years the assistance which municipalities may demand from the Government ceases. The flourishing state of the revenue during many years enabled the Government to grant aid to municipalities beyond what the law directed, and during some years an endowment equal to the assessment was paid to them.

Value of ratable property.

The value of property assessed for municipal purposes during 1891 was returned by the various local authorities at £144,277,400; but this amount somewhat understates the actual capital value, as much of the unimproved land, especially in suburban and country districts, is returned at far below its real worth. Taking all municipalities, this understating amounts to, at least, 5 per cent., so that the actual value of property within incorporated districts is not less than £151,491,000 as stated on page 444. If, however, the nominal values as returned by the municipal authorities themselves are taken, the capital and annual value of property in all districts during the past ten years were as follow:—

Year.	Metropolitan Area.		Country Municipalities.	Total.
	Sydney.	Suburbs.		
	£	£	£	£
1882—Annual value	1,655,952	1,314,919	1,064,560	4,035,431
Capital value	29,807,140	19,749,107	11,697,199	61,253,446
1883—Annual value	1,838,642	1,449,947	1,266,502	4,555,091
Capital value	36,772,840	20,676,070	14,425,195	71,874,105
1884—Annual value	1,979,772	1,690,109	1,524,218	5,194,099
Capital value	39,595,440	23,046,854	17,661,067	80,303,361
1885—Annual value	2,035,235	1,935,884	1,713,578	5,684,697
Capital value	40,704,700	29,410,787	21,828,805	91,944,292
1886—Annual value	2,096,476	2,289,685	1,727,951	6,114,112
Capital value	41,929,520	32,960,620	21,657,828	96,547,968
1887—Annual value	2,131,026	2,501,904	1,895,591	6,528,521
Capital value	42,529,525	36,644,629	26,699,331	105,804,168
1888—Annual value	2,228,817	2,987,061	2,149,566	7,365,444
Capital value	44,576,340	45,635,138	30,073,617	120,285,095
1889—Annual value	2,276,362	3,110,825	2,405,163	7,792,350
Capital value	45,527,240	48,208,834	33,475,972	127,212,046
1890—Annual value	2,710,488	3,141,101	2,505,214	8,356,803
Capital value	51,237,600	47,987,210	34,784,948	134,009,758
1891—Annual value	2,785,846	3,227,851	2,683,806	8,697,503
Capital value	55,716,900	51,174,200	37,386,300	144,277,400

ncrease in ine years.

The increase shown in this table is very considerable. From 1882 to 1891 the annual value has risen from £4,035,431 to £8,697,503, or at the rate of 8·90 per cent. per annum, while the capital value has advanced from £61,253,446 to £144,277,400, or at the rate of 10 per cent. per annum. Part of this increase is due to an additional number of districts incorporated; but when an allowance is made for these it will still be found that the progress is very satisfactory.

The amount of increase during the past nine years will be found in the following table :—

Municipalities.	Increased annual value during nine years.		Increased capital value during nine years.	
	Total.	Per cent.	Total.	Per cent.
	£		£	
City of Sydney	1,129,894	68·23	25,909,760	86·92
Suburbs of Sydney........	1,912,932	145·48	31,425,093	159·12
Country Municipalities..	1,619,246	152·10	25,689,101	219·62
Total................	4,662,072	115·53	83,023,954	135·54

Position of Sydney amongst cities of the Empire.

The growth of the city and suburbs has been marvellous, and Sydney now stands as the third city of the British Empire, as estimated by the annual value of its ratable property, Melbourne ranking second. The annual value of property in Sydney and suburbs, covering an area of 90,988 acres in 1890, was £5,851,589, and in 1891, £6,013,697; the annual value of Melbourne and suburbs during 1890 was £6,533,717, and for 1891 it is returned at £6,815,315. The following are the annual values of the principal British cities for 1890 :—

London (Metropolitan Board of Works)...	£31,387,848	Leeds........................	£1,253,333
Glasgow	3,445,748	Sheffield	1,107,714
Liverpool	3,259,367	Bradford	1,025,106
Manchester and Salford	3,548,073	Bristol	1,019,642
Birmingham...............	1,786,482	Nottingham	899,826
		Newcastle-on-Tyne.......	875,428

Capital value of each municipality

The capital value of ratable property in all boroughs and municipal districts for 1891 is shown in the following table :—

Capital Value of Ratable Property in Boroughs and Municipal Districts during 1891.

Boroughs and Municipal Districts.	Total Capital Value of Ratable Property.	Boroughs and Municipal Districts.	Total Capital Value of Ratable Property.
METROPOLITAN—	£	COUNTRY—	£
Sydney	55,716,900	Adamstown	181,500
SUBURBS—		Albury	464,700
Alexandria	836,700	Armidale	340,500
Ashfield	2,500,000	Ballina	116,500
Balmain	3,312,200	Balranald	91,700
Botany	356,000	Bathurst	731,100
Botany North	364,300	Bega	312,200
Burwood	1,419,500	Berry	529,000
Camperdown	710,000	Bingara	73,000
Canterbury	817,800	Blayney	107,700
Concord	475,600	Bombala	108,500
Darlington	608,800	Bourke	450,000
Drummoyne	392,400	Bowral	326,700
Enfield	344,200	Braidwood	217,200
Five Dock	320,000	Broken Hill	1,395,700
Glebe	2,200,700	Broughton Vale	81,700
Hunter's Hill	730,800	Burrowa	131,800
Hurstville	1,105,200	Camden	166,000
Kogarah	676,000	Campbelltown	206,000
Leichhardt	2,150,000	Carcoar	41,300
Macdonald Town	596,700	Carrington	241,700
Manly	1,465,000	Casino	181,700
Marrickville	2,277,500	Cobar	136,400
Newtown	2,360,200	Condobolin	48,600
Paddington	2,380,200	Cooma	199,800
Petersham	1,863,500	Coonamble	114,300
Randwick	2,420,000	Cootamundra	234,200
Redfern	2,275,000	Coraki	66,000
Rockdale	1,029,100	Cowra	164,300
Ryde	629,300	Cudal	80,600
St. Peters	604,500	Cudgegong	513,700
Strathfield	835,000	Deniliquin	245,800
Sydney, North	5,237,600	Dubbo	337,800
Waterloo	1,447,200	Dundas	209,700
Waverley	2,464,700	Forbes	241,600
Willoughby	1,424,000	Gerringong	200,000
Woollahra	2,544,500	Glen Innes	330,800
		Gosford	79,600
Total, Suburbs	51,174,200	Goulburn	1,080,000
Total, Sydney	55,716,900	Grafton	560,000
		Granville	894,300
Total, Metropolitan	106,891,100	Grenfell	105,700
		Greta	163,500
		Gulgong	81,700
		Gundagai	159,000

Capital Value of Ratable Property—*continued.*

Boroughs and Municipal Districts.	Total Capital Value of Ratable Property.	Boroughs and Municipal Districts.	Total Capital Value of Ratable Property.
COUNTRY—*continued.*	£	COUNTRY—*continued.*	£
Gunnedah	81,700	Penrith	449,000
Hamilton	532,000	Plattsburg	253,600
Hay	336,300	Port Macquarie	60,800
Hill End	31,700	Prospect & Sherwood	450,000
Hillston	124,200	Queanbeyan	105,400
Illawarra Central	995,500	Quirindi	85,900
Illawarra North	349,700	Raymond Terrace	75,500
Inverell	293,800	Richmond	192,000
Jamberoo	376,800	Scone	69,000
Jerilderie	121,000	Shellharbour	192,600
Junee	178,500	Shoalhaven, Central	110,000
Katoomba	252,300	Silverton	43,500
Kempsey	310,000	Singleton	213,400
Kiama	277,000	Singleton, South	64,700
Lambton	242,600	Smithfield & Fairfield	250,000
Lambton, New	207,400	St. Mary's	200,000
Lismore	530,100	Stockton	441,400
Lithgow	371,600	Tamworth	399,000
Liverpool	624,700	Taree	115,500
Maclean	73,600	Tenterfield	148,200
Maitland, East	350,000	Tumut	136,000
Maitland, West	1,080,800	Ulladulla	360,000
Merewether	303,200	Ulmarra	291,200
Mittagong	187,800	Uralla	82,200
Moama	192,800	Wagga Wagga	1,017,000
Molong	184,300	Walcha	94,300
Moree	106,700	Wallsend	281,000
Morpeth	116,800	Waratah	410,000
Moruya	143,400	Wellington	112,000
Moss Vale	230,300	Wentworth	76,500
Mudgee	293,700	Wickham	572,500
Murrumburrah	103,200	Wilcannia	127,400
Murrurundi	118,700	Windsor	236,800
Musclebrook	118,500	Wingham	96,300
Narrabri	124,400	Wollongong	675,000
Narrandera	207,300	Yass	231,000
Newcastle	2,475,000	Young	368,000
Nowra	193,600		
Numba	53,000	Total, Country	37,386,300
Nyngan	76,600	Total, Metropolitan	106,891,100
Orange	515,700		
Orange, East	207,000		
Parkes	170,700		
Parramatta	1,692,000	Total, Metropolitan and Country	144,277,400

Two other Municipalities were in existence in 1891, Rookwood and Temora, but as their incorporation took place only at the end of the year, no returns were available for insertion. The capital value of ratable property in Broken Hill and other mining municipalities is exclusive of that of the mines within the Municipality, which is estimated at several millions, but under the terms of the Municipalities Act the mines are exempt from taxation.

Municipal Revenue.

The total revenue collected by all the Municipalties of the Colony during the year 1891 amounted to £867,214, including the State endowment of £168,306, but exclusive of the proceeds of loans raised during the year to the amount of £127,700. The chief heads of revenue were as follow:—

Incorporated Districts.	General rates.	Other rates.	Endowment	Other Revenue.	Total.
	£	£	£	£	£
Sydney—City	159,160	......	......	64,162	223,322
„ Suburbs	146,597	40,439	68,464	52,577	308,077
Country	111,594	49,426	99,842	74,953	335,815
Total...........	417,351	89,865	168,306	191,692	867,214

Ordinary rates.

The general rates amounted to £417,351, 1s. in the £ being the ordinary rate of all Municipalities except the City of Sydney, which levied 1s. 6d., and the country municipality of Cudal 9d., for every £ sterling of annual value. No lighting rate is levied in the city, but in order to make the comparison complete, the cost of lighting should be deducted from the general rates; the amount spent for this service during 1891 was £12,191, or equal to about 1d. in the £. In all other Municipalities the cost of lighting is a distinct charge from the general rates.

Special rates.

Other rates for gas, sewerage, and water services are levied in many municipalities, and the receipts under this head amounted in 1891 to £89,865. This sum does not include the proceeds of rates levied by the Metropolitan Water and Sewerage Board which, though actually local rates, are not collected by the Municipalities affected by them. The amount received by the Board during 1891 was £247,134, making, with the sum already mentioned, £336,999 as the proceeds of special rates from these services. The amount of gas, sewerage, and water rates varies between 1d. and 1s., though the average is not more than 4d. in the £.

State endowment.

The State endowment is equivalent to 5s. 6d. per resident, and amounted to 19·41 per cent. of the total revenue received. The proportion which each source of revenue bears to the whole varies considerably, as the following statement shows :—

Incorporated Districts.	General Rates.	Other Rates.	Endowment.	Other Revenue.
	per cent.	per cent.	per cent.	per cent.
Sydney—City	71·27	....	....	28·73
,, Suburbs ...	47·58	13·13	22·22	17·07
Country	33·23	14·72	29·73	22·32
Total—Colony	48·13	10·36	19·41	22·10

Gross revenue of Municipalities.

It will be seen from a previous table that the gross revenue of all municipalities, not including the State Endowment, is £698,908; if to this be added the revenue of the Metropolitan Water and Sewerage Board, the total will reach £946,042. This may be taken as the whole burthen of local taxation, and is equivalent to about 27s. per head of the population residing within the limits of incorporated districts, and to 10·8 per cent. of the total annual value of ratable property.

Expenditure.

The total expenditure during 1891 by the various municipalities amounted to £1,090,536, which is £223,322 in excess of the receipts from ordinary sources, the excess being accounted for by expenditure from loans raised during the year, or remaining over from previous years. The municipal expenditure may be grouped under the following heads :—

	£
Salaries and office expenses	74,839
Improvement works	649,230
Lighting	69,531
Water (Country)	20,972
Interest on loans	89,581
Sinking funds—Repayment of loans	46,903
Miscellaneous charges	*139,480
Total	£1,090,536

* Includes interests on overdrafts.

The cost of administration shown above, viz., £74,839, amounts to 6·9 per cent. of the disbursements; the expenditure on public works and improvements to 59·5 per cent.; on lighting to 6·4 per cent.; on water supply (in country municipalities only) to 1·9 per cent.; on interest on loans to 8·2 per cent.; on Sinking Funds for repayment of loans to 4·3 per cent. of the total disbursements; while the remaining 12·8 per cent. are made up by miscellaneous items.

Expenditure of the Municipality of Sydney.

The expenditure of the Municipality of Sydney reached in 1891 the sum of £343,793, which may be distributed as under :—

	£
Salaries and office expenses	16,959
Improvement works	258,175
Lighting	12,191
Interest on loans	33,400
Interest on overdraft	839
Loans, Streets, and Town Hall Sinking Funds	12,850
Miscellaneous charges	9,379
Total	£343,793

The expenses of administration only amount to 4·9 per cent. of the whole disbursements, improvement works absorb 75·1 per cent., lighting 3·6 per cent., interest 9·7 per cent., sinking funds 3·7 per cent., and other charges 3 per cent. of the total expenditure.

Suburban expenditure.

The expenditure of the suburban boroughs and municipalities for the year was £370,389, which may be subdivided under the following heads :—

	£
Salaries and office expenses	24,152
Public works	187,625
Lighting	34,759
Interest on loans	33,031
Repayment of loans	22,200
Miscellaneous	68,622
Total	£370,389

The office expenses amounted to 6·5 per cent. of the total revenue of these municipalities, and will appear by no means unreasonable when the smallness of some of the districts and the difficulties attending the inception of municipalities are borne in mind. The large proportion of 50·7 per cent. was expended upon public works; lighting claiming in addition 9·4 per cent.; and repayment of loans 6 per cent. of the total expenditure. To cover interest upon loans 8·9 per cent. was required, the remaining proportion of 18·5 per cent. being devoted to miscellaneous services. The expenditure of the country municipalities of the Colony for the year 1891 was £376,354, which, divided under the same headings as given for suburban municipalities, would appear as follows :—

Country municipal expenditure.

	£
Salaries and office expenses	33,728
Public works	203,430
Lighting and water supply	43,553
Interest on loans	23,150
Repayment of loans	11,853
Miscellaneous	60,640
Total	£376,354

The salaries and office expenses form a charge of 9 per cent. upon the total receipts during the year, which is, as may be expected, considerably larger than in the suburban municipalities. The greater number of the country boroughs and municipal districts are large in area and small in population and revenue, and the proportion of expenses required to defray salaries and other charges is naturally larger than in the case of the smaller and more populous districts surrounding the metropolis. The proportion of expenditure under various heads is as follows :—

Salaries and office expenses	9·0	per cent.
Public works	54·0	,,
Lighting and water supply	11·5	,,
Interest on loans	6·2	,,
Repayment of loans	3·2	,,
Miscellaneous	16·1	,,

Municipal loans.

The receipts of the municipalities of the Colony from loans amounted to £127,700 during the year 1891; while the sum paid off existing loans, or towards sinking funds for the extinguishing of loans, was £46,903. The total amount of loans outstanding at the close of the year was £1,793,775, and towards meeting this amount there was a sum at the credit of the sinking funds amounting to £162,747, so that the net liability was £1,631,028. The sum quoted above was owing during only part of the year, so that the total interest paid amounted to only £89,581, the rate of interest varying from 4 to 9 per cent.; the average rate being approximately 5 per cent. The total debt per head of population living in municipalities amounts to £2 12s. 1d., and if allowance be made for sinking funds £2 7s. 4d., while the yearly charge for interest is 2s. 6d. per head. These sums, viewed apart from the resources of the municipalities, are by no means formidable; but, taken in connection with their general assets, the local debts of municipalities will appear insignificant. The following are the outstanding loans of the City of Sydney :—

Indebtedness per head.

City loans.

Where floated.	Fund.	Amount.	Rate.	When due.
		£	per cent.	
Sydney	City	20,000	6	1901
,,	,,	10,000		1903
,,	,,	10,000		1904
London	,,	60,000	4	1912
Sydney	Cattle Sale-yards	35,000	6	1902
London	Streets Loan	200,000	5	1904
,,	,,	100,000	4	1912
Sydney	Town Hall Loan	40,000	6	1901
,,	,, ,,	35,000		1906
London	,, ,,	200,000	4	1912
		710,000		

Payment of these latter sums on maturity is, by Act of Parliament, in each case peremptorily provided for by the institution of sinking funds. The amount paid into the sinking funds during 1891 was £12,850.

Assets of city of Sydney.

Against this debt of £710,000 there exist assets approximately amounting to £2,671,410, distributed as follows :—

	£
Value of made roads, &c.	830,000
Town Hall	350,000
Markets and land	630,000
Other buildings	120,000
Cattle Sale-yards	121,000
Wharves	410,000
Sinking Funds	107,910
City Fund (reserve account)	75,000
Cattle Sale Yard Fund (fixed deposit)	17,500
Town Hall Loan Fund (fixed deposit)	10,000
Total	£2,671,410

And if to this sum be added the present assessed value of future rates, allowing twenty years' purchase amounting to £3,343,000, the assets of the City Corporation amount to about £6,014,410, so that the indebtedness of the city of Sydney amounts to only 11·8 per cent. of the available assets.

Assets of other municipalities.

The outstanding loans of the other incorporated districts of the Colony amounted to £1,083,775, or slightly more than four times the ordinary rates of the year. Against this they have assets, exclusive of outstanding rates, amounting approximately to £4,644,120, distributed as follows :—

	£
Value of made roads and streets	3,455,100
Water works	376,500
Sewerage works	70,783
Gas or Electric Lighting works	164,400
Buildings	522,500
Accrued sinking funds	54,837
Total	£4,644,120

The present assessed value of future rates at twenty years' purchase amounts to £5,389,600, which, added to the sum stated above, would make the total assets of these municipalities reach the sum of £10,033,720. The total municipal debt of the incorporated districts outside the boundaries of the city of Sydney would therefore appear to be only 10·8 per cent. of the available assets.

Streets and roads.

The length of streets and lanes within the boundaries of the city of Sydney is 115 miles. All the roadways are formed, kerbed, and either wood-blocked or metalled, the area laid down of the former material to the end of 1891 was 329,721 square yards, exclusive of the wood blocking of Circular Quay, 20,000 square yards. The value to the city of these streets is estimated at £830,000. Throughout the suburbs the extent of roads and streets is 1,314 miles, of which 918 miles are regularly formed, and the approximate value of these roadways, with culverts, bridges, and similar works, may be set down at £1,680,600. In the other municipalities of the Colony there are 2,365 miles of made roads, and 2,487 miles of unformed roads, in all 4,852 miles, the value of these improvements being about £1,774,500.

Municipal works.

Municipal councils are authorised by law to undertake the construction of water, sewerage, gas or electric-lighting works, in addition to the work usually carried on by them. To regulate the construction, maintenance, and management of these works, various enactments have been passed.

Water supply.

As early as 1850 authority was given the City Corporation by the Legislative Council for the construction of water and sewerage works, and in accordance with such authority a system of water supply from the Lachlan, Bunnerong, and Botany Swamps was adopted. This scheme involved the interception of the water, from the stream draining these swamps, at a point near the shore of Botany Bay, and pumping it to Crown-street Reservoir, 132 feet above the level of the sea; thence a portion was raised to Paddington, 280 feet over sea-level, and a further portion to Woollahra, 320 feet over sea-level. The cost of the water supply works as carried out by the City Corporation, including 301 miles of reticulation pipes, was £1,719,565. These works have now been superseded by the Nepean scheme, recommended by the Royal Commission on Water Supply, and carried out by Mr. E. O.

Nepean scheme.

Moriarty, M.I.C.E. The works in connection with this scheme have been conceived on a scale of magnitude commensurate with the importance to which Sydney will ultimately attain. The source of supply is the united waters of the Nepean, Cataract, and Cordeaux, mountain streams draining an area of 354 square miles, fed by the abundant rain which falls along the coast district west of Wollongong. The water is intercepted at a height of 437 feet above the level of the sea, and flows through a series of conduits—partly tunnel, partly open canals, and in places wrought-iron aqueducts—to Prospect Reservoir, a distance of 40 miles from the farthest source of supply. Here an impounding reservoir has been constructed capable of holding 11,000 million gallons, of which nearly 7,000 million will be available for supply, the remainder being intended as a settling area. The top water at Prospect Reservoir is 195 feet over high water in Sydney Harbour. From Prospect the water is led through open conduits for a further distance of 4¾ miles, whence it is taken to Crown-street Reservoir, a distance of 16 miles, in iron pipes. The conduits above Prospect Reservoir have a capacity of 150 million gallons per day, and for 10 miles below this reservoir the capacity of the canals and pipes equals a maximum of 50 million gallons, while for the last 11 miles the water flows through 48-inch and 42-inch cast-iron pipes, having a capacity of 17·5 million gallons daily. In this work there are :—

Prospect Reservoir.

Capacity of conduits.

Tunnels	11⅝ miles.
Open canals	33¼ ,,
Wrought-iron pipes, 8ft., 7ft. 6in., and 6ft. diameter	5⅜ ,,
Cast-iron pipes, 48in. and 42in. diameter	11¼ ,,
Water surface of reservoir	1¾ ,,
Total	63¼ miles.

The Prospect Reservoir covers an area when full of 1,261 acres, or nearly 2 square miles, and has a capacity of 10,812,313,000 gallons. The dam is 7,300 feet long, 30 feet wide on top, and is carried to a height of 84 feet at the centre. It contains some 2,316,500 cubic feet of earthwork. The water face is covered with heavy bluestone pitching. When the dam is quite full 6,744,343,000 gallons are available by gravitation. The water, after leaving the dam, is conducted by an open canal for 4¾ miles to the Pipe Head Basin, and is then conveyed by wrought-iron pipes, 6 feet in diameter, to Potts' Hill, a further distance of 5 miles, where the water delivers itself into a 100,000,000-gallon tank. This work is designed to tide the city over any interruption of supply from Prospect, as well as to prevent fluctuation of head of pressure. The water, after leaving the reservoir, passes through a screening tank, whence it is conveyed by pipes to the various reservoirs situated at Crown-street, capacity 3,250,000 gallons; Paddington, 2,000,000 gallons; Woollahra, 1,000,000 gallons; Waverley, 1,087,000 gallons; Petersham, 2,157,000 gallons; and to the North Sydney water supply tanks at Ryde and Chatsworth, which have an aggregate capacity of 2,500,000 gallons. The districts of Campbelltown, Liverpool, Granville, and Ashfield are supplied from the mains by gravitation.

By a recent Act the management of the whole of the Metropolitan Water Supply, including both the Botany and the Nepean works, as well as the reticulation and supply of Sydney, has been placed in the hands of a Board called the Metropolitan Water Supply and Sewerage Board, three members of which, including the chairman, are appointed by the Government, and four elected by the municipalities interested. The revenue received by the Board during 1891 was £165,831, and the expenditure £154,154, of which £23,571 was for maintenance, £14,685 for management, £111,981 for interest on loans, and £3,917 depreciation account. The profit on the year's transactions was £11,677, and there were rates in arrear to the amount of £26,799. The cost of all works connected with water supply purposes to the close of 1891, including purchase of land, maintenance, and supervision, was £3,308,565. The amount of outstanding loan liability is £3,306,649, and the net revenue shows a return of 3·9 per cent. on this amount. The number of houses and persons supplied

Cost of works.

with water in the metropolitan district is 76,093 and 365,246 respectively; the average consumption is 9,540,102 gallons daily, or at the rate of 125 gallons per house and 26·11 gallons per person, the total supply for the year being 3,482,237,514 gallons.

Country water supply.

Conditions of loans for water works.

The Country Water Supply and Sewerage Act was passed in 1880. Under the provisions of this measure municipalities outside the county of Cumberland are entitled to construct, or have constructed for them by the Government, works for water supply and sewerage, provided the construction of the same be approved by the Governor-in-Council, and the municipalities agree to pay back the original cost of the works, with interest at the rate of 4 per cent. per annum. The Government pays for the certified cost of the works, and the municipalities pay the Government by instalments extending over a period of sixty years. Under the operations of this Act twelve water supply works have been carried out by the Government and three by municipal councils. The works completed by the Government to the end of 1891 were:—

Works constructed.

Town.	Cost.	Town.	Cost.
Albury	£43,686	Hunter River District	£369,891
Bathurst	51,563	Lismore	8,584
Bourke	14,129	Manly	24,015
Balranald	6,361	Orange	29,685
Deniliquin	17,622	Wagga Wagga	37,998
Goulburn	54,976	Wentworth	9,508
		Total	£668,018

Water-works at Hay, Forbes, and Wilcannia were carried out by the municipalities themselves, and the cost was advanced by the State, but the water-works of Narrandera, Newcastle, Parramatta, Penrith, and Windsor were constructed by those municipalities without any assistance. During 1891 there was expended on account of the Country Towns' Water Supply a total sum of £29,262, subdivided as follows:—

Town.	Cost.	Town.	Cost.
Orange	£ 1,413	Cootamundra	£1,224
Manly	16,466	Other towns	482
Hunter River District	3,026		
Richmond	4,826	Total	£29,262
Albury	926		

These various amounts were contributed by the Government towards the cost of maintenance and extension of the works completed in the above mentioned municipalities, and for the construction of new works.

Sewerage.

Under the same Act which authorised the construction of the Sydney water supply, the sewerage works were also undertaken. The original sewerage works of Sydney were begun in 1854, and at the close of 1890, 70·27 miles of old city sewers were in existence. In 1880 an entirely new scheme of sewerage of a very comprehensive character was begun. This system will drain the whole of the northern and southern slopes of the city and suburbs, discharging the sewerage of the former into the ocean between Bondi and South Head, and of the latter at a sewerage farm on the shores of Botany Bay. Up to the end of 1891 there had been constructed 75·1 miles of new sewers, and 4·1 miles of storm-water drains, making together, with the old city sewers, a total of 149·4 miles of sewers and drains, of which length 85·3 miles were ventilated, the aggregate length of the ventilating shafts erected being 53,082 feet. The number of houses sewered and population served was 26,884 and 129,043, respectively. During 1891 the revenue of the Board was £81,303, chiefly from rates, and the expenditure £71,906, viz., £15,624 for maintenance, £9,787 for management, and £46,495 for interest on loans and overdraft. The credit balance at the end of the year was, therefore, £9,397, and the amount of outstanding rates due to the Board was £11,545. The present value of the Sewerage Works, under the Board, is estimated at £1,445,050. The amount of outstanding loan capital at the end of 1891 was £1,447,287, and the amount of net revenue received, was equal to 3·9 per cent. on this amount. Under an Act of Parliament all municipalities are empowered to carry out sewerage works, and this has been done by a number of them. The total length of sewers constructed by suburban municipalities is 28·7 miles, and their cost of construction £49,900, while in various country towns 16·1 miles of sewers have been constructed at a cost of £20,883.

Municipal Gas-works.

Under the authority of a recent Act, gas-works have been constructed in several places by municipalities. These works supply not only the lamps required for street purposes, but in most instances undertake the illumination of private dwellings also.

Electric lighting.

A number of municipalities have also constructed Electric Lighting Works, both for street lighting purposes and for the supply of the light to private houses. The value of these works in 1891 was estimated at £164,400.

Houses and population.

In Sydney there were, according to the census, 5 April, 1891, 19,044 houses, occupied by 106,938 persons. In the suburbs of Sydney there were 57,213 houses, in which 275,159 persons dwelt, while in the other municipalities there were 62,545 houses, occupied by 306,647 persons, thus making a total for all municipalities of 138,802 dwellings, accommodating 688,742 people. In the unincorporated portion of the Colony there are about 95,700 houses, inhabited by 443,492 persons.

Municipal elections.

Municipalities are for the most part divided into wards, according to population, and every ratepayer is entitled to vote at the election of aldermen. Persons assessed at less than £25 annual value are entitled to one vote—from £25 to £75, to two votes—from £75 to £150, to three votes—and over £150, to four votes. Votes are cumulative up to four, and the method of voting is by ballot, as in the parliamentary elections.

The persons qualified to vote at municipal elections number approximately 154,275, thus distributed:—

	Municipal voters.
Sydney	22,358
Suburbs	63,798
Other municipalities	68,119
Total	154,275

The number of electors entitled to vote for Parliament is 314,156, so that the proportion of municipal to parliamentary voters is 49·1 per 100, and to the total population 13·2 per 100. Including the twenty-four representatives of the city, there are 1,445 aldermen in the Colony, and the average number of municipal electors per alderman is thus 107. Of the 154,275 electors mentioned above, 87,343 are entitled to only one vote, 43,920 are entitled to two, 12,976 to three, and 10,036 to the maximum of four.

Number of electors.

In connection with local self-government by means of the municipal system, occurs the only instance in which the principle of what is known as local option has been put into operation in the Colony. For many years there was a strong agitation in favour of local option, or the right of the inhabitants of any district to control the liquor traffic in that district, and on several occasions attempts were made to legislate upon the subject without success. In the year 1882, however, an instalment of the principle was included in the Licensing Act then passed, which, with an amendment made in the following year, is still in force. These measures provide that in every municipality, or ward of a municipality, a local option vote shall be taken every three years, at the election for aldermen, in which the ratepayers are required to vote either Yes or No on two questions: (1) Whether any new publicans' licenses shall be granted during the coming three years in the municipality or ward in question; and (2) whether any removals of publicans' licenses shall be allowed within the same period. A majority of over eleven-twentieths of the votes polled is required to make the vote operative in the negative. The advocates of local option are not content with this partial adoption of the principle; they urge its extension to every electorate in the Colony, all persons on the electoral roll to have the right to vote. They further propose to place it in the power of a majority of the electors to say whether licensed public-houses should be suffered to exist at all. The extreme advocates of local

Local option.

Carried out at municipal elections.

option even contend that women should have the right to vote upon this question as well as men, and that public-houses should be abolished without compensation to the occupants or owners. The last local option vote for the suburban municipalities was taken in February, 1891. There were then 50,356 voters on the rolls of those municipalities, but only 12,101 took the trouble to vote upon the first question, and 11,626 on the second. It would therefore appear that very little interest in the matter is taken except by the extreme advocates of temperance on the one hand, and those interested in the drink traffic on the other, while the general public is apathetic on the subject. Out of the 99 elections in February, 1891, the local option vote was carried in the negative in 89 instances on both questions, and in 10 in the affirmative.

Extension of local government

It is proposed by a measure now before Parliament to extend the system of local government over the remaining portions of the Colony. This is on all sides deemed a very necessary step, as under the present system there is no certainty that the expenditure of the Government on purely local works is at all times equitable. Leaving out of consideration the expenditure on works of national importance, the Government during the past thirty-two years expended no less than £22,894,581 on works of a purely local character, not including school buildings. Of this sum £14,975,853 was expended in the country districts, and £7,918,728 in the metropolis. The division of the Colony into local government districts will not necessarily be followed by an entire stoppage of the direct expenditure in works of merely local interest by the central Government, but the larger portion of the works now undertaken by Government will be left to the local authorities, who, having to directly provide part of the expenditure, will probably see that it is laid out to the best advantage. Adopting the two divisions of metropolis and country, already mentioned, the expenditure on account of public works in each since 1860 is given below. As regards the metropolitan expenditure, nearly half the total—viz., £3,799,600—was expended on water supply and sewerage works, which are sources

Expenditure by Government for local purposes.

evenue. In the country districts the amount expended on ar works was only £750,600 :—

Country districts.		Metropolis.		Total.	
Expenditure.	Rate per head.	Expenditure.	Rate per head.	Expenditure.	Rate per head.
£	£ s. d.	£	£ s. d.	£	£ s. d.
65,861	0 5 4	21,240	0 4 5	87,101	0 5 1
103,250	0 8 0	34,709	0 7 1	137,959	0 7 9
118,131	0 8 11	40,612	0 8 5	158,743	0 8 9
94,825	0 6 11	15,842	0 3 3	110,667	0 5 11
133,591	0 9 4	17,352	0 3 6	150,943	0 7 10
109,835	0 7 5	12,168	0 2 4	122,003	0 6 0
92,796	0 6 0	9,963	0 1 9	102,759	0 4 11
137,405	0 8 7	37,621	0 6 4	175,026	0 8 0
163,819	0 9 11	33,701	0 5 5	197,520	0 8 8
190,810	0 11 1	21,460	0 3 4	212,270	0 9 0
124,540	0 7 0	32,347	0 4 10	156,887	0 6 5
169,239	0 9 4	18,009	0 2 7	187,248	0 7 4
129,003	0 6 9	40,524	0 5 8	169,527	0 6 5
230,385	0 11 7	51,056	0 6 10	281,441	0 10 4
265,003	0 13 0	48,211	0 6 3	313,214	0 11 1
375,819	0 17 9	47,781	0 6 0	423,600	0 14 5
415,025	0 19 0	68,710	0 8 2	483,735	0 16 0
497,184	1 2 0	60,141	0 6 10	557,325	0 17 8
643,912	1 7 4	86,373	0 9 2	730,285	1 2 2
794,983	1 12 5	165,856	0 16 6	960,839	1 7 10
793,966	1 11 0	201,734	0 18 7	995,700	1 7 4
583,471	1 1 10	357,182	1 10 10	940,653	1 4 7
704,892	1 5 5	702,696	2 17 8	1,407,588	1 15 3
758,052	1 6 1	931,615	3 12 7	1,689,667	2 0 3
940,858	1 10 8	669,209	2 9 5	1,610,067	1 16 5
981,951	1 10 7	704,636	2 9 5	1,686,587	1 16 4
868,923	1 6 0	767,906	2 11 1	1,636,829	1 13 9
784,941	1 2 9	556,660	1 15 2	1,341,601	1 6 8
904,477	1 5 9	344,414	1 0 8	1,248,891	1 4 0
798,383	1 2 4	583,786	1 13 2	1,382,169	1 5 11
874,077	1 3 10	444,723	1 4 0	1,318,800	1 3 11
1,126,446	1 9 11	790,491	2 0 7	1,916,937	1 13 6

Public parks and recreation reserves.

has always been the policy of the State to provide the resi- s of incorporated towns with parks and reserves for public ation, and the City of Sydney contains within its boundaries xtent of parks, squares, and public gardens larger than in most of the great cities of the world without regard to area. They cover altogether 748 acres, or 26 per of the whole of the city proper. In addition to these reserves, the inhabitants of Sydney have the use of 780 acres, formerly reserved for the water supply of the city, but now known as the Centennial Park. This magnificent recreation ground has been cleared and planted, and is laid out with walks and drives, so that it is likely to become a favourite resort with the citizens. The suburban municipalities are also well provided for, as they contain 1,796 acres of public parks and reserves, dedicated to, or purchased for, the people by the Government, or 3·1 per cent. of their aggregate area.

The National Park.

In addition to these reserves, the Government dedicated to the people, in December, 1879, a large area of land, situated within easy distance of the metropolis. This estate, now known as the National Park, with the additions subsequently made in 1880 and 1883, contains a total area of 36,320 acres, surrounding the picturesque bay of Port Hacking, and extending in a southerly direction towards the mountainous district of Illawarra. It is covered with magnificent virgin forests, the scenery is charming, and its beauties attract thousands of visitors.

Temporary and permanent commons.

In the country districts, reserves extending often over one million acres, have been proclaimed as temporary commons, whilst considerable areas have been from time to time dedicated as permanent commons attached to inland townships, which are otherwise well provided with parks and reserves within their boundaries.

The expenditure for purchasing and maintaining public parks and recreation reserves in the metropolitan and country districts from January, 1880, to June, 1892, was as follows :—

Metropolitan—		
Centennial Park	£198,277	
Botanic Gardens	72,301	
Government Domains	31,573	
Garden Palace Grounds	13,546	
All other Reserves	282,811	
Total		598,508
Country Districts		132,518
National Park		34,525
Total		£765,551

PART XV.

Defence.

Imperial garrison.

NEW South Wales was garrisoned with British troops from the time of its foundation as a colony until the year 1870. For part of the years 1870 and 1871 the Colony was without regular troops, its defence being entirely in the hands of the volunteer force. In 1871 a local regular defence force was enrolled, comprising one battery of artillery and two companies of foot, the latter, however, were disbanded in the following year. The permanent artillery was strengthened by a second battery in 1876, and by a third in 1877. To supplement the Imperial troops in Australia a volunteer force was enrolled in 1854, Great Britain being then at war with Russia. The Act authorizing the establishment of the force was 18 Vic. No. 8. The original strength of this corps was one troop of cavalry, one battery of artillery, and six companies of foot, but with the termination of the Crimean war this force practically ceased to exist. A few years later, in 1860, the volunteer movement was revived, and a second force enrolled, consisting of one troop of mounted rifles, three batteries of artillery—two stationed at Sydney, and one at Newcastle—and twenty companies of infantry, fourteen of which were recruited from Sydney and its suburbs, and six from the country districts. The total strength of all arms was about 1,700 men. In 1868 the force was reorganized under the Volunteer Regulation Act, passed towards the close of the previous year. In 1878 a further reorganization of the volunteer troops of the Colony took place upon a plan drawn up by Sir William Jervois, and in 1885 an additional force of reserves was enrolled.

Volunteer movement.

Defence forces of the Colony.

The defence forces of the Colony comprise three distinct branches—the Permanent or Regular Military Force, Volunteers or Partially-paid Force, and Reserves. The Permanent Force consists of general staff, artillery, submarine miners, and medical staff corps. The mounted infantry was disbanded in July, 1890. The Volunteers consist of artillery, engineers, submarine miners, infantry, mounted infantry, cavalry, naval brigade, and naval artillery; while the Reserves, which are purely volunteer corps, comprise infantry only at present.

Permanent Force.

The Permanent Force comprises a general staff of 8 commissioned, 30 non-commissioned officers, and 3 rank and file, and 22 commissioned officers of artillery, 56 non-commissioned officers, and 478 rank and file. The medical staff corps consists of 2 commissioned and 2 non-commissioned officers, and 11 rank and file. There are also 1 commissioned officer in the submarine miners, 1 non-commissioned officer, and 19 rank and file, the whole force thus numbering 633. The rates of pay, exclusive of allowances of the regular artillery, apart from the permanent staff, were for the year 1891:—Colonel, £730; lieutenant-colonel, £450; majors, £312 to £383; captains, £238 to £275; lieutenants, £200 to £238; brigade-surgeon, £472; staff-surgeon, £365; sergeants from 4s. to 10s. per diem; corporals, 3s. 4d. per diem; bombardiers, 3s. 2d. per diem; trumpeters, 2s. 3d. per diem; master gunners, 7s. to 10s. per diem; gunners, 2s. 3d. per diem; the submarine miners are paid on the same scale as the artillery, and the total cost was £79,349. The artillery man the batteries guarding the harbours of Sydney, Botany Bay, and Newcastle, mount guard at the vice-regal residence, and perform such other duties as usually appertain to a garrison. The troops are a fine body of men; the minimum height at which recruits are accepted is 5ft. 6in.

Volunteer Force.

The Act authorizing the establishment of a volunteer force was assented to on the 24th July, 1854, and the Act continued in operation with various modifications until 1878, when the land forces of the Colony were remodelled; and further alterations took place in 1888. The volunteer force was retained, but a system of payment was introduced in lieu of the indirect remuneration by a land grant of 50 acres for five years continuous efficiency, which obtained previous to 1878. The ages at which recruits for the volunteer force are taken are between 18 and 40 years. The volunteer force of the Colony consists of six arms in addition to the permanent staff, and the total strength of the force is 9,805 men of all ranks. The staff numbers 113, of whom 11 belong to the permanent staff (unattached) and 3 to the honorary staff, 8 are medical officers, and 20 non-commissioned officers and 71 rank and file belong to the Medical Staff Corps.

Artillery.

The artillery consists of 532 men of all ranks, of whom 29 are commissioned and 111 non-commissioned officers, with 383 privates, besides which there are 1 commissioned, 7 non-commissioned officers, and 1 orderly-room clerk, on the permanent staff. The men are distributed in four districts, the strength of each being:—

Sydney	364
Newcastle	61
Wollongong	56
Bulli	51
	532

Engineers and submarine miners.

The engineers are located in Sydney, and number 119 men of all ranks, viz., 7 commissioned officers, 20 non-commissioned officers and buglers, and 92 sappers. The submarine miners are also located in Sydney; they comprise 7 commissioned officers, 20 non-commissioned officers and buglers, and 88 privates, or 115 of all ranks.

Infantry.

The infantry forces are distributed over five districts, the strength of each district being—

Sydney	721
Western	643
Northern	703
Southern	321
South-western	311
	2,699

This arm comprises 128 commissioned officers, 310 non-commissioned officers, 4 commissioned, 26 non-commissioned officers, and 4 orderly-room clerks, on the permanent staff, and 2,227 privates and buglers.

Mounted infantry.

The mounted infantry were only established in 1888. They now number 17 commissioned officers, 38 non-commissioned officers, 1 commissioned, 6 non-commissioned officers, and 1 orderly-room clerk, on the permanent staff, and 326 privates and buglers, and are distributed as follows :—

Sydney	6
Western District	144
Northern District	96
Southern District	143
	389

Cavalry.

The cavalry provide their own horses and equipment, their uniform and arms being provided by the Government. They are equipped as ordinary light cavalry. The force consists of 19 commissioned officers and 55 non-commissioned officers, besides 1 commissioned, 7 non-commissioned officers, and 1 orderly-room clerk, on the permanent staff, and 330 privates and trumpeters. It is distributed through four districts :—

Sydney	41
Southern District	152
Western District	50
Northern District	170
	413

Commissariat.

There is a small Commissariat and Transport Corps comprising 1 commissioned and 7 non-commissioned officers, and 30 privates and trumpeters, and 1 non-commissioned officer on the permanent staff, a total strength of 39.

Volunteer reserves.

Besides the Volunteer force described above, there are the remains of an unpaid Volunteer reserve, with a strength of 105 men of all ranks. They consist of 5 commissioned and 3 non-commissioned officers and 84 privates, besides 3 commissioned and 10 non-commissioned officers on the permanent staff. They are all stationed in Sydney, with the exception of 1 commissioned and 4 non-commissioned officers of the permanent staff, in the Northern District. The reserves have been nearly all merged into the partially-paid force, or rifle companies; they are provided with arms and equipment, and each company is granted an allowance for incidental expenses.

Efficiency—how secured.

To rank as an efficient, every volunteer must serve for nine days continuously in camp, and for two detached days, together with certain specified half-days and night drills, during the year. The artillery are required to attend 11 out of 16 half-day parades, including shot practice. The engineers must attend, in addition to the continuous training, 9 out of 14 half-day parades, and 9 night drills; the submarine miners, 15 out of 22 half-day parades, and the infantry, 9 out of 13 half-day parades, and a course of musketry. Pay is granted to all ranks according to a sliding scale. Gunners, sappers, and privates receive 10s. for each day of continuous training, and a like sum for each detached day's parade; for a half-day parade 5s. is paid, and for a night parade 2s. In addition to these sums, every volunteer passing through the musketry course, and qualifying as a marksman, is granted 15s.; if as a first-class shot, 10s.; and if as a second-class shot, 5s.; with a bonus of £2 if he qualifies at the end of the year as an efficient.

Rifle Companies.

In 1888 a system of rifle companies was established, and at the end of 1891 there were 90 companies, comprising 5,281 men, distributed through the Colony as follows:—

	Companies.	Men.
Metropolitan, Western, and Southern Districts ...	60	3,511
Northern District	30	1,770
Total	90	5,281

Naval Forces.

New South Wales has no navy of its own, with the exception of the corvette "Wolverene," armed with sixteen 60-pounder muzzle-loading rifled guns, in addition to which two 5-inch breech-loading Armstrong guns, two quick-firing 3-pounders, and two Nordenfeldts have been added to the vessel's armament during 1891, with the view of affording the men the necessary facilities for acquiring a knowledge of the use of these weapons. Besides the "Wolverene" there are two small torpedo steam-launches, the "Acheron" and the "Avernus," the defence of its coast being in the hands of the British ships on the Australian station, and of the Australian Auxiliary Squadron. The naval forces of the Colony comprise 631 men of all ranks, 116 being officers and petty officers, with 515 A.B.'s, bandsmen, and buglers.

Naval Brigade.

The Naval Brigade was first enrolled in 1863. It was originally intended to operate chiefly for coastal defence, but hitherto it has been employed mostly as a light artillery land force. Quite recently it has been occasionally put to its proper use by being drilled in naval manœuvres on board the "Wolverene" during short cruises at sea. The force consists of 20 commissioned officers, 24 petty officers, 15 midshipmen and cadets, 3 gunnery instructors, and 276 classed as A.B. Of these men, 282 are stationed in Sydney and 56 at Newcastle.

Naval Artillery Volunteers.

There is another arm of the naval service known as the Naval Artillery Volunteers. Its duty is to man and work any gunboat available for this service, or serve as field artillery if other service be not available. The Government supply arms and uniforms, and allowed in 1891 a subvention of £1,098 for military instruction and ordinary expenses incidental to the working of such a corps. The strength is 274 men of all ranks, including 16 officers, 1 warrant officer, 28 petty officers, 200 A.B.'s, 3 buglers, and 26 in the band.

In connection with the Naval Defence Forces there are also 3 staff officers, 11 officers and men in charge of the "Wolverene," and 5 in charge of the two torpedo-boats.

In addition to the land and naval forces enumerated, the Ordnance Store Department consists of 1 assistant commissary general of ordnance, 1 deputy assistant commissary general of ordnance, 1 visiting surgeon, and 69 men.

Total Defence Forces.

The total defence forces of the Colony number 11,141 officers and men, distributed as follows :—

Regular Military Force :—	
General Staff	41
Artillery	556
Submarine Miners	21
Medical Staff Corps	15
	633
Volunteer Force :—	
Permanent Staff	11
Medical Staff Corps	99
Honorary Staff	3
Cavalry	413
Artillery	532
Engineers	119
Submarine Miners	115
Mounted Infantry	389
Infantry	2,699
Reserves	105
Rifle Companies	5,281
Commissariat and Transport Corps	39
	9,805
Naval Forces :—	
Naval Defence Force Staff	3
H.M.C.S. "Wolverene"	11
Naval Brigade	338
Naval Artillery Volunteers	274
Torpedo Boats—"Acheron" and "Avernus"	5
	631
Ordnance Store Department	72
Grand Total	11,141

A cadet force in connection with the Public Schools has existed for many years, but in 1890 it was reorganized, and placed on a better footing. The object of the movement is to train the rising male population to the use of arms. In addition to the corps belonging to the Public Schools, some of the leading Colleges and High Schools have cadet enrolments. The total strength of the whole force at the end of 1891 was about 7,600. Of this number 6,889 belong to the Public Schools. Included in the latter figures are 10 on the Permanent Staff.

Expenditure on Defence.

The expenditure by the State during 1891 on defence works and the Permanent and Volunteer Military forces, amounted to £279,239, and was distributed as follows:—

	£
General Staff	8,209
Military Instructors	1,285
Artillery Force	60,473
Permanent Submarine Miners	3,459
Permanent Mounted Infantry	159
Works of Defence	28,220
Volunteer Force	128,377
Naval Brigade	5,463
Naval Artillery Volunteers	1,098
Training Ship "Wolverene"	3,202
Torpedo Defence	1,286
Ordnance and Barrack Department	32,244
Commanding Engineer	3,057
Permanent Medical Staff Corps	2,707
Total	£279,239

Whatever opinion may be entertained of the present condition of the defences of the Colony there can be no doubt that a very large sum of money has been expended upon them. The details cannot now be ascertained respecting the earlier defences of the harbour of Port Jackson, such as Fort Phillip, where the Observatory now stands, Fort Macquarie, and Fort Denison, which, with the batteries at Dawes' Point, Kirribilli, and Mrs. Macquarie's Chair were thought to render Sydney almost impregnable some forty years ago, when the ponderous artillery now in use had not been invented. The returns of expenditure for military, naval, and defence purposes since the year 1860 are, however, available, and are appended hereto. It will be observed that during the thirty-two years no less than £3,131,066 was expended from the Consolidated Revenue, or an average of £97,800 per annum, for these services :—

Year.	Military Expenditure (including Buildings and Works of Defence).	Naval Expenditure.	Total.	Year.	Military Expenditure (including Buildings and Works of Defence).	Naval Expenditure.	Total.
	£	£	£		£	£	£
1860	30,134	......	30,134	1877	84,130	6,497	90,627
1861	36,635	......	36,635	1878	68,716	7,327	76,043
1862	39,703	......	39,703	1879	95,720	8,589	104,309
1863	38,294	1,943	40,237	1880	94,631	6,945	101,576
1864	17,483	919	18,402	1881	96,079	7,165	103,244
1865	19,635	2,050	21,685	1882	94,468	17,696	112,164
1866	17,576	3,944	21,520	1883	124,701	26,880	151,581
1867	20,500	3,655	24,155	1884	160,367	15,627	175,994
1868	32,334	3,660	35,994	1885	101,840	22,451	*124,291
1869	29,148	4,009	33,157	1886	239,727	25,753	265,480
1870	27,525	3,837	31,362	1887	284,471	30,397	314,868
1871	17,896	4,416	22,312	1888	149,246	20,797	170,043
1872	32,966	4,427	37,393	1889	196,201	10,974	207,175
1873	30,842	5,116	35,958	1890	229,713	11,419	241,132
1874	61,366	5,482	66,848	1891	268,190	11,049	279,239
1875	61,153	5,441	66,594				
1876	45,894	5,317	51,211	Total.	2,847,284	283,782	3,131,066

*Does not include £121,630 Australian Contingent to the Soudan.

Loan money expended on defence.

In addition to the sums paid out of current revenue a large amount of loan money has been expended in the erection of fortifications, which, it is expected, will serve for the protection of future as well as the present generation of colonists. The details of this expenditure are as follow :—

Previous to 1871................ £181,164

	£		£
1871	43,601	1883	24,819
1872	24,466	1884	4,683
1873	35,134	1885	54,729
1874	22	1886	61,814
1875	368	1887	8,350
1876	4,506	1888	22,296
1877	3,735	1889	56,440
1878	33,227	1890	46,982
1879	21,270	1891	111,896
1880	14,582		
1881	22,640	Total to 1891...	£816,481
1882	39,757		

Naval Station in Port Jackson.

Another source of expenditure to the Colony is that of the Naval Station in Port Jackson. An arrangement was made with the Imperial authorities by which the Government of the Colony undertook to give up Garden Island for the purposes of a naval station, and to erect thereon the requisite buildings; also to provide certain other accommodation required for the use of the war-vessels in the harbour. In consideration of this, it was agreed on the other side, that Sydney should be the head-quarters of the Australian fleet, and also that the Imperial Government should give up all their claim upon certain lands and buildings owned by them in the Colony. These included, among others, the

Paddington Barracks, the Domain and Botanic Gardens, and the old Commissariat Stores, as well as other valuable properties. In carrying out the works at Garden Island and Kirribilli Point the following expenditure has been incurred :—

Year.	Amount. £
1885	642
1886	33,928
1887	15,431
1888	52,013
1889	15,574
1890	42,409
1891	42,201
Total to end 1891	202,198

Total expenditure for defence purposes.

It thus appears that the total amount spent by the Colony of New South Wales, for defence purposes, since the beginning of the year 1860, to the end of 1891, was £4,310,745, or an average of about £134,800 per annum. The items which make up this amount may be recapitulated thus :—

	£
From Consolidated Revenue	3,131,066
From Loans—On Fortifications and Warlike Stores	816,481
From Loans—For Naval Station, Port Jackson	202,198
Value of Land alienated in virtue of Volunteer Land Orders, computed at £1 per acre	161,000
Grand Total	4,310,745

Australasian Auxiliary Squadron.

Under the provisions of the "Australasian Naval Force Act," which was assented to on 20th December, 1887, all the colonies have entered into an agreement with the British Government for the payment of a *pro rata* subsidy for the maintenance of an Australian Auxiliary Squadron. The total subvention to be paid by all the colonies amounts to £91,000, of which New South

Wales will contribute about £27,000. The fleet consists of five fast cruisers, and two torpedo gunboats, as represented by the "Archer" (improved type) and "Rattlesnake" classes of the British navy; of these, three cruisers and one gun-boat will always be kept in commission, the remainder being held in reserve in Australasian ports, but ready for commission whenever circumstances may require their use. The vessels in reserve at the present time are the Mildura, the Wallaroo, and the Karrakatta. The agreement is for a period of ten years, and shall then, or at the end of any subsequent year, be terminable, provided two years' notice has been given. The vessels have been built by the British Government, but the Australasian Colonies will pay the interest on their prime cost at the rate of 5 per cent., provided such payment does not exceed £35,000. The colonies are also to pay the actual charge for maintenance as mentioned above. On the termination of the agreement these vessels will remain the property of the Imperial Government. The strength of the fleet already in Australian waters will be maintained. The vessels specified in the agreement between Great Britain and the Colonies are to be in addition to these. The Australasian squadron is commanded by the Admiral on the Australian station, whose head-quarters are in Sydney, where a residence is provided for him by the Colony. The squadron, particulars of which will be found on page 480, arrived in Port Jackson on 5th September, 1891.

Fortifications

Extensive fortifications have been erected at various important points on the coast. Sydney has two lines of defence, and is deemed almost impregnable; Botany Bay forming the southern defence of Sydney is strongly fortified, as also is Newcastle, the great coal port of the Colony. Also at Bulli and Wollongong in the South Coast District, fortifications have been erected.

The following is a list both of the Imperial war-vessels now on the Australasian station under Rear-Admiral Lord Charles Scott, and of the vessels of the Australian auxiliary squadron:—

Imperial War Vessels on Station.

Name.	Class.	Material of hull.	Displacement.	Indicated horse-power.	Draught of water extreme.	Length.	Beam.	Armour.	Armament.		Speed.	Coal endurance.	
									Guns.	Torpedo tubes.		Coal that can be carried in bunkers.	Distance that can be steamed at 10 knots' speed.
			tons.		ft. in.	ft. in.	ft. in.				knots.	tons.	knots.
Orlando	Twin-screw cruiser, 1st class, armoured.	Steel	5,600	8,500	24 2	300 0	56 0	Armoured belt at water-line, 10 in.; armoured deck, 3 in.; conning tower, 12 in.	2 9·2-in. 22-ton B.L.R. 10 6-in. 5-ton B.L.R. 16 Q.F. Hotchkiss, 7 M., 3 L.	2	18·5	900	7,000
Curaçoa	Screw cruiser, 3rd class.	Steel and iron sheathed with wood.	2,380	2,540	18 10	225 0	44 6	....	4 6-in. 5-ton B.L.R. 8 5-in. 2-ton B.L.R. 1 Q.F. Hotchkiss 9 M., 2 L.	2	13·0	470	3,800
Rapid	Screw cruiser, 3rd class.	Composite.	1,420	1,400	15 9	200 0	38 0	....	2 6-in. 4-ton B.L.R., 10 5-in. 38-cwt. B.L.R., 4 M., 1 L.	....	13·1	425	6,600
Royalist	Screw cruiser, 3rd class.	do	1,420	1,510	15 9	200 0	38 0	....	2 6-in. 4-ton B.L.R., 10 5-in. 38-cwt. B.L.R., 4 M., 1 L.	....	13·1	425	6,600
Lizard	Screw gun-boat, 1st class.	do	715	1,000	13 6	165 0	29 0	....	6 4-in. 25-cwt. B.L.R., 4 M.	....	12·7	105	2,500
Goldfinch	Screw gun-boat, 1st class.	do	805	1,200	12 8	165 0	30 0	....	6 4-in. 26-cwt. B.L.R., 2 Q.F. Hotchkiss, 2 M.	....	13·0	105	..
Ringdove	Screw gun-boat, 1st class.	do	805	1,200	12 8	165 0	30 0	....	6 4 in. 26-cwt. B.L.R., 2 Q.F. Hotchkiss, 2 M.	....	13·0	105	..
Dart*	Screw yacht.	do	470	200	12 11	133 0	25 2	....	2 L.	....	8·8	64	....

* Surveying service. M.L.R., Muzzle-loading rifled guns; Q.F., Quick-firing guns; M., Machine guns; L., Light guns under 15 cwt.; B.L.R., Breech-loading rifled guns

Australian Auxiliary Squadron.

Name.	Class.	Material of hull.	Displacement.	Indicated horse-power.	Draught of water extreme.	Length.	Beam.	Armour.	Armament.		Special.	Coal endurance.	
									Guns.	Torpedo tubes.		Coal that can be carried in bunkers.	Distance that can be steamed at 10 knots' speed.
			tons.		ft. in.	ft. in.	ft. in.				knots	tons.	knots.
Katoomba....	Screw cruiser, 3rd class.	Steel	2,575	7,500	16 6	265 0	41 0	Deck armour over machinery space, 2 in. and 1 in.; conning tower, 3 in.	8 4·7 Q.F. guns, 8 3-pr. Q.F. guns, 1 7-pr. M L.R. gun (boat and field), 4·45 in. 5 barrel Nordenfeldt.	4	16·5	300	6,000
Ringarooma..	Screw cruiser, 3rd class.	do ..	2,575	7,500	16 6	265 0	41 0	do ..	do ..	4	16·5	300	6,000
† Mildura	Screw cruiser, 3rd class.	do ..	2,575	7,500	16 6	265 0	41 0	do ..	do ..	4	16·5	300	6,000
† Wallaroo ..	Screw cruiser, 3rd class.	do ..	2,575	7,500	16 6	265 0	41 0	do ..	do ..	4	16·5	300	6,000
Tauranga	Screw cruiser, 3rd class.	do ..	2,575	7,500	16 6	265 0	41 0	do .	do ..	4	16·5	300	6,000
Boomerang ..	Torpedo gun-boat.	do ..	735	4,500	10 6	230 0	27 0	Conning tower, 1 in.	2 4·7 in. Q.F. guns, 4 3-pr. Q.F. guns.	5	*18·75	160	2,500
† Karrakatta..	Torpedo gun-boat.	do ..	735	4,500	10 6	230 0	27 0	do ..	do ..	5	*18·75	160	2,500

* This speed can be increased until, under favourable conditions, for a short period, a maximum of 21 knots can be obtained. Q.F.—Quick-firing guns.
† In reserve.

PART XVI.

Constitution and Government.

THE record of New South Wales as a Crown Colony belongs more to history than to current statistics. It is therefore not proposed, in the following sketch, to deal with matters prior to the establishment of Responsible Government, though a brief narrative of the early history and settlement of the country will be found in the opening pages of this volume.

Present mode of government began in 1855

The present form of government was inaugurated about thirty-seven years ago, the "Act to confer a Constitution on New South Wales, and to grant a Civil List to Her Majesty," having received the Royal assent on the 16th July, 1855. This important statute was proclaimed in Sydney on the 24th of November of the same year, and at once came into operation, sweeping away entirely the former system, and constituting an elective representative Chamber, thus, by the granting of equal privileges, making the colonists of New South Wales the equals of their countrymen in other parts of the Empire. The ties which bound the Colony to the Empire were in no way loosened, for the Constitution Act simply conceded to the people of New South Wales the same rights which prevailed in the United Kingdom, namely, of taxing themselves, and of being governed by Ministers responsible to a Parliament elected by the people. The authority vested in the Sovereign remains the same as before, though the mode of its exercise is widely different. The Sovereign, previously to Responsible Government, exercised, through the Governor, almost despotic

The Sovereign.

power. This official, in times past, united in himself the executive and legislative functions, and personal liberty and independence were to no small degree in his power. With the establishment of Responsible Government, this state of things ceased, and the greatest measure of individual liberty is now found compatible with the full protection of public rights. The readiness with which the people of the Colony adapted themselves to the forms and practice of their new government was not a little remarkable, and fully justified their assumption of its privileges.

Laws enacted in Queen's name.

All laws are enacted in the name of the Queen, "by and with the advice of the Legislative Council and Legislative Assembly," the Governor, as the Royal Deputy, giving the assent of the Sovereign immediately to Acts of Parliament, or reserving them for the consideration of the Sovereign, if he thinks fit. In order that the Constitution may be clearly understood, it will be well to consider, under distinct heads, the several elements of which the Government and Legislature consist.

THE GOVERNOR.

How appointed.

Previously to the year 1879 the Governor of the Colony was appointed by Letters Patent under the Great Seal; but in that year the practice was discontinued by the advice of Sir Alfred Stephen, given during the tenure of office of Sir Hercules Robinson. The change was first carried out in the appointment of Lord Augustus Loftus. The office of Governor is now constituted by permanent Letters Patent, and by a standing Commission, instead of as formerly by letters issued *pro hac vice* only. The Governor receives his appointment at present by Commission under the Royal sign manual and signet, which recites the Letters Patent of the 29th April, 1879, as well as the instructions issued (under sign manual and signet) in further declaration of the Queen's "will and pleasure." The original Letters Patent, thus recited and enforced, declare that the Governor is directed and empowered "to do and execute all things that belong to his office according to the tenor of the Letters Patent, and of such Commission as may be issued to him under our sign manual and signet, and according to such instructions as may from time to time be given to him under our sign manual and signet, or by our order in our Privy Council, or by us through one of our Principal Secretaries of State, and to such laws as are now or shall hereafter be in force in the Colony." By a custom which has now long prevailed no Governor is allowed to retain his office longer than six years. Should the Governor die or become incapable during his tenure of office, or be removed before the arrival of his successor, or should he have occasion to leave the Colony for any considerable period, the Government is to be administered (1) by the Lieutenant-Governor; or, if there be no Lieutenant-Governor, (2) by an Administrator to be appointed according to the provisions of the Letters Patent and instructions. The present Lieutenant-Governor is Sir Frederick Matthew Darley, who was appointed by a Commission, dated 23rd November, 1891.

Lieutenant-Governor.

The Administrator.

The Lieutenant-Governor, or, in his absence, the Administrator, is empowered by his Commission to execute the office of Governor during any temporary absence of the Governor from the Colony; but the Governor may not be absent, except in accordance with the terms of his instructions. He may not leave the Colony without the Queen's special leave, unless on a visit to the Governor of a neighbouring colony, for a period exceeding one month at a time, nor exceeding in the aggregate one month for every year of his service; but, on the other hand, the Governor may leave the Colony for any period not exceeding one month without its being reckoned as a departure, if he shall have previously informed the Executive Council in writing of his intention, and appointed a deputy to act for him till his return. This deputy must, in the first instance, be the Lieutenant-Governor; but if, from any cause, his services are not available, the Governor may appoint whom he pleases as his deputy.

The Governor's functions, according to the Letters Patent, Commission, and Instructions may be recapitulated as follows:—

The Governor is the custodian of the Great Seal, under which all Crown grants, &c., must pass.

Governor appoints Executive.

The Governor has the appointment of his own Council—the Executive. He is also to summon that Council, and is, ordinarily its President; but in his absence some other member may be nominated to preside. It is usual, however, to appoint some member of the Ministry permanent Vice-President, who presides in the absence of the Governor.

The Governor is the fountain of honour within the Colony, since to him belongs the power to appoint, in the Queen's name, all Judges, Justices of the Peace, Commissioners, and other "necessary officers and Ministers"; and he may remove, by virtue of his powers as Viceroy, from the exercise of his office any official so appointed.

Prerogative of mercy.

The Governor is also the depositary of the prerogative of mercy within the Colony, having it in his power to pardon, either absolutely or conditionally, any offender convicted in New South Wales. He can also remit fines, penalties, and forfeitures due to the Crown, but he cannot pardon or remit on the condition of the offender voluntarily leaving the Colony, unless the offence has been a political one only. In all capital cases until recently the final responsibility of deciding whether or not the death penalty should be carried out rested solely with the Governor, but by a new arrangement which has been agreed to by all the Australasian colonies such final power is now exercised by the Governor "with the advice of the Executive Council." This places the procedure of these colonies, in regard to capital cases, on similar lines to the system that has for some time past been in force in Canada. Its adoption was suggested and strongly urged by Lord Onslow, the former Governor of New Zealand, and Lord Knutsford, the Secretary of State for the Colonies in the recent Salisbury Administration, ascertained the views of the various

Australasian colonies upon the subject. It being found that they all accepted the proposal as an improvement upon the practice then existing, a circular despatch was sent to each colony with instructions for its adoption. The new system was first used in New South Wales towards the end of October, 1892.

The Governor is also vested with the authority of the Crown, enabling him to nominate the members of the Upper House of the Legislature, and to summon, prorogue to a future day, or dissolve "any legislative body" existing in the Colony.

Governor acts by advice of Executive.

His instructions, however, provide that in the exercise of the above powers the Governor is to act by the advice of the Executive Council in all cases, except those whose nature is such that in his opinion the public service "would sustain material prejudice," or in matters too trivial to submit to the Council, or "too urgent to admit of their advice being given;" but in all such urgent cases he must communicate to the Council as soon as practicable the measures taken by him, and his reasons for acting. It is expressly provided, however, that the Governor may, if he think fit, disregard the advice of the Executive and act in direct opposition to the declared will of his advisers, but in such cases he is required to make a full report of the whole circumstances for the information of the Secretary of State for the Colonies.

Governor Viceroy as regards Royal assent.

The Governor acts as Viceroy as regards giving the Royal assent or vetoing Acts passed by the Legislature, or reserving Bills for the special consideration of the Sovereign. The instructions deal at large with this matter, but it is usual in practice to be guided to a large extent by the advice of the law officers of the Crown. There are eight different classes of Bills, however, to which the Governor is bound to refuse the Royal assent. They are:—

(1.) Divorce Bills (that is, private bills divorcing particular persons).

(2.) Bills making any kind of grant, gratuity, or donation to the Governor.

(3.) Bills affecting the currency.

(4.) Bills imposing differential duties, which are not in accordance with the "Australian Colonies Duties Act, 1873."

(5.) Bills apparently contrary to Imperial treaty obligations.

(6.) Bills interfering with the discipline or control of Her Majesty's land or sea forces employed in the Colony.

(7.) Bills of great importance, or extraordinary in their nature, whereby the Royal prerogative, or the rights and property of Her Majesty's subjects residing beyond the Colony, or the trade and shipping of the United Kingdom and its dependencies may be prejudiced.

(8.) Bills containing provisions to which the Royal assent has already been refused, or which have been once disallowed, unless they contain a clause suspending their operation until the Queen's pleasure has been signified, or unless the Governor is satisfied that there is urgent necessity for bringing any such Bill into immediate operation, in which case he is empowered to assent to the Bill on behalf of the Queen, if it is not repugnant to the law of England, or inconsistent with Imperial treaty obligations; and in every such case he is required to transmit the Bill to Her Majesty, together with his reasons for assenting to it.

Acts regulating Royal assent.

The following Acts of Parliament regulate the action of the Governor in assenting to Bills on behalf of the Queen, or reserving them for the consideration of the Sovereign:—5 and 6 Vic., secs. 31–32, cap. 76; 7 and 8 Vic., sec. 7, cap. 74; and 13 and 14 Vic., cap. 59, secs. 13, 32, and 33. The effect of these enactments is to deprive any reserved Bill of all force and legality until the Queen's assent thereto has been formally communicated to the Governor; and power is given to Her Majesty to veto any Bill to which the Governor has assented on her behalf within two years after the receipt of such Bill by the Secretary of State for the Colonies, in which case the Bill is to be declared null and void by message of the Governor, and proclamation. Reserved Bills are to be laid before Her Majesty in Council, and the Queen may allow them or not within a period of two years from the day on which they were reserved by the Governor. The Queen's assent to reserved Bills may be transmitted by telegram.

Summoning of Parliament, &c.

By the Act 7 Vic., No. 16, all Acts of Parliament which become law are required to be registered by the Registrar-General within ten days of their so becoming law.

The above is a summary of the powers and duties of the Governor, as defined by his instructions and the Letters Patent, but additional duties have been imposed upon him by the Constitution and Electoral Act. In accordance with these enactments he must summon the Legislative Assembly, appoint the President of the Legislative Council; prorogue or dissolve Parliament; appoint his ministers *proprio motu;* also appoint, with the advice of the Executive, all public officers whose appointment is not vested in heads of departments; issue all warrants for the payment of money; issue the writs for general elections, and, in the absence of the Speaker, issue writs to fill vacancies occurring in the Assembly. He also appoints all returning-officers, and issues the writs for additional members provided for by the expansive clauses of the Electoral Act.

Dissolution of Parliament.

In summoning, proroguing, or dissolving Parliament, the Governor usually acts according to the advice tendered him by the Cabinet, but he is in no way bound to do so; and, as a matter of fact, has sometimes declined to be guided by his Ministers. This, however, has never happened except in respect to granting a dissolution. As to summoning or proroguing a difference of opinion is hardly likely to arise. The relations established between the Ministry and the representatives of the people are in accordance with the time-honoured precedents prevailing in Great Britain, which may be thus defined. The Cabinet must be chosen from—"(1) Members of the Legislature; (2) Holding the same political views, and chosen from the party possessing a majority in the

House of Commons; (3) Carrying out a concerted policy; (4) Under a common responsibility, to be signified by a collective resignation in the event of Parliamentary censure; and (5) acknowledging a common subordination to one Chief Minister."

Circumstances under which a Government must resign.

The Imperial rule as to the circumstances under which a Government is bound to resign, is as follows:—Censure, involving loss of office, rests entirely with the Lower House, or popular branch of the Legislature. Hence directly a Ministry fails to command a majority of the House of Commons it must give place to another. Want of confidence in a Cabinet may be shown in three ways: first, by a direct vote of censure, or a specific declaration of want of confidence; secondly, by a vote disapproving of some act of the Government; or thirdly, by the rejection of some important measure introduced by the Ministry. In any of these cases Ministers must either resign, or appeal to the country if they can get the Sovereign to sanction a new election.

These rules have been virtually adopted in New South Wales, and the undoubted right of the Governor, as the depositary of the Royal prerogative, to refuse to grant a dissolution if he think fit, has been more than once exercised. In March, 1877, Sir Hercules Robinson refused to grant a dissolution to Sir John Robertson, and in September of the same year he also declined to enable Sir Henry Parkes to go to the country. The reason alleged in each case was that the Assembly refused to make provision for the expenditure of the year. It will thus be seen that a grave responsibility is thrown upon the Governor in the exercise of the unquestioned right of granting or refusing a dissolution of Parliament, and in the cases mentioned it can hardly be doubted that Sir Hercules Robinson acted within his powers. The Viceroy is the conservator of the rights and interests of the whole population, and it must be evident that grave evils would ensue should a dissolution take place before supplies had been granted.

Prerogative of mercy.

The exercise of the prerogative of mercy is such an important function of the Governor, and he is so liable on some occasions to have strong pressure brought to bear upon him in connection with it, that it will be well to quote at length the instructions recently received upon this point. The mode of procedure in capital cases has already been referred to, and in other cases the Governor is instructed not to pardon or reprieve any offender without receiving the advice of one, at least, of his Ministers; and in any case in which such pardon or reprieve might directly affect the interests of the empire, or of any country or place beyond the jurisdiction of the Government of the Colony, the Governor shall, before deciding as to either pardon or reprieve, take those interests specially into his own personal consideration in conjunction with such advice as aforesaid. In another part of his instructions the Governor is permitted to act in opposition to the advice of the Executive Council "if he see sufficient cause," but he is to report any such matter to the Sovereign without delay.

Governor as Commander-in-Chief of military forces.

One exception to the rule that every exercise by the Governor of the Royal prerogative is subject, practically, to the control of the Legislature, occurs in connection with the exercise of his office as Commander-in-Chief of the land and sea forces. The Governor's powers in this regard are defined and regulated by the Military and Naval Forces Regulation Act of 1871, which, after providing for the raising and maintenance of a standing force, goes on to vest the supreme command in the "Governor," which title, in the interpretation clause, is defined to mean "the Governor with the advice of the Executive Council," *unless the context shall otherwise indicate.* Full powers with relation to the Volunteer Force are also bestowed on the Governor by the Volunteer Regulation Act of 1867, but in this, as in the former statute, "Governor" only means "the Governor with the advice of the Executive Council," *if this meaning is not inconsistent with the context or subject-matter.* It will at once be seen that these are both important limitations, as in certain imaginable contingencies the Governor is left free to act on his own responsibility. This places the Governor almost in the position of the Commander-in-Chief in England (when such an officer exists, which is very seldom, the control of the army usually being vested in Generals commanding-in-chief); that is, he has at times the absolute disposal of the armed force of the Colony. This power is peculiar to New South Wales, as in other British Colonies the Governor possesses no more power over the military than he does over any civil department of the service. The position of the Governor as Captain-General does not, however, give him power to take the direct command of Imperial troops, should any such be stationed in the Colony.

Martial Law.

As regards the far more important power of the Governor to proclaim martial law, different opinions are held. But there is no doubt, as the power has not been conferred by any statute in force in the Colony, that, if it exists, it must be a matter of prerogative. The necessity for proclaiming martial law has happily never occurred since the advent of Responsible Government.

THE EXECUTIVE.

The Cabinet.

The Executive Council is composed of the ten Ministers, namely: The Colonial Secretary, the Treasurer, the Attorney-General, the Secretary for Lands, the Secretary for Public Works, the Minister of Justice, the Minister of Public Instruction, the Secretary for Mines, and the Postmaster-General, with sometimes a Vice-President of the Executive Council, who is without a portfolio. These form the Cabinet, and, of course, are responsible to Parliament. The Ministry, as the advisers of the Governor, must also retain his confidence, but practically, this is seldom likely to be withdrawn, so long as they can command a working majority in the Assembly. The Governor may dissolve Parliament although the Ministry have not sustained a defeat, and in this case the continued existence of any Government would depend directly on the vote of the constituencies, but such a contingency can happen but seldom.

Ministers not usually appointed from Upper House.

It is rare for more than one Minister to be selected from the Upper House, although at the present time there are two, and it will thus be seen that the principle of the responsibility of members of the Government to Parliament is fully carried out. For every act of the Governor as Viceroy some Minister is responsible to Parliament; and even in matters of Imperial interest, where the final onus rests upon the Governor, he himself is responsible to the Imperial Government, whose members are under the control of the House of Commons, so that no loophole is left for the exercise of any arbitrary act. The Crown, except in two instances (appeals to the Privy Council, and the bestowal of titles), acts towards the Executive through its representative, the Governor; and so long ago as the inception of Responsible Government, Earl Grey declared, in an official despatch, that he should make "a judicious use of the influence, rather than of the authority, of his office," which wise maxim has usually been followed. But in extreme cases, such as when his sanction is requested to any illegal proceeding, the Governor is bound, without question, to keep the law, though he may thereby be brought into hostile relations with the Cabinet. Sir Michael Hicks-Beach, in a communication to the Governor-General of Canada in 1879, clearly laid down the doctrine that the Governor of any British Colony "has an unquestionable constitutional right to dismiss his Ministers, if from any cause he feels it incumbent on him to do so." This does not militate against the doctrine of responsibility, for if the Ministry appointed by the Governor do not possess the confidence of Parliament, they cannot hold office, and hence the Governor will be forced to give way, or else persevere till he can select a Ministry which the Assembly will accept. The final control will thus be, as in every other case, with the representatives of the people. In matters of routine the Governor will necessarily act on the advice of his Ministers, and in most cases relating to the internal economy of the departments, he will adopt even the individual recommendations of the Ministers by whom they are severally controlled.

Ministers responsible to Parliament.

Dismissal of Ministers

As regards matters of purely Imperial interest the Governor is responsible to the British authorities for their due conservation.

If, in consequence of his action on any such matter, he is involved in a dispute with his Ministers, he is bound to refer them to the Sovereign, should his action have been endorsed by the Colonial Office. If his conduct is not approved of in England he would most likely be recalled. It follows from this, that in no case can the Governor be held to be responsible directly to Parliament for his conduct. His Ministers are responsible, but personally he has only to render an account to the Crown itself, that is, to the Imperial Parliament.

Executive must be summoned by Governor.

The Executive Council cannot discharge any function unless duly summoned by the Governor, and at least two members, besides the Governor or presiding member, are present to form a quorum. Formal minutes are, of course, kept of all proceedings. The Executive Council, as at present constituted, is as follows:—

Premier and Colonial Secretary.	The Hon. Sir George Richard Dibbs, K.C.M.G.
Colonial Treasurer	The Hon. John See.
Attorney-General	The Hon. Edmund Barton, Q.C.
Secretary for Lands	The Hon. Henry Copeland.
Secretary for Public Works......	The Hon. William John Lyne.
Minister of Public Instruction	The Hon. Francis Bathurst Suttor.
Minister of Justice	The Hon. Richard Edward O'Connor.
Postmaster-General	The Hon. John Kidd.
Secretary for Mines	The Hon. Thomas Michael Slattery.
Vice-President of the Executive Council and Representative of the Government in the Legislative Council (without portfolio)	The Hon. Sir Julian Salomons, Q.C.

Since the introduction of Responsible Government there have been twenty-seven Ministries, the average tenure of office being one year and four months. Nine Governments have been displaced by votes of censure, expressed or implied, and three resigned through having been defeated on important measures of policy; while two retired on having been saved from defeat only by the Speaker's casting vote, and three others through a motion for the adjournment of the House having been carried against them. Three Ministries were merged into the succeeding ones; five resigned without a direct vote having been carried against them, but in consequence of not possessing a working majority; and one Government fell to pieces through internal disagreements.

THE PARLIAMENT.

Relative power of the two Houses undefined.

It seems a singular omission in the Constitution Act that no definition is given of the relative powers of the Legislative Council and Legislative Assembly. Such is the fact, but no inconvenience has arisen thereby, since by common consent it has been agreed that the precedents regulating the proceedings and relations, *inter se*, of the two Houses of the Imperial Parliament shall be followed, as far as applicable, in New South Wales. The Constitution Act provides that all money bills shall be introduced in the Lower House only. The important rule of the House of Commons, affirmed two hundred years ago and constantly enforced ever since, that "all aids and supplies, and aids to Her Majesty in Parliament are the sole gift of the Commons, and it is the undoubted right of the Commons to direct, limit, and appoint in such bills, the ends, purposes, considerations, conditions, limitations, and qualifications of such grants, which ought not to be changed or altered by the House of Lords," is also held to be in force as regards the Parliament of this Colony, and has always been recognized and acted upon.

Parliament cannot punish for contempt.

The two Houses, however, do not possess the most important of the privileges of the Imperial Parliament, namely, the right of punishing for contempt, although the Legislative Assembly has, on one occasion, punished one of its members, for conduct assumed to be dishonorable beyond its precincts, by expelling him. As regards disorderly conduct within the walls of the Chamber it has been held by the Supreme Court and affirmed by the Privy Council, that the Assembly only possesses the power of suspending a member for disorderly conduct for the period of the sitting at which such conduct took place. A member may be also removed from the House by order of the Speaker if he persists in obstruction or contemns the Standing Orders; but fortunately this course has seldom been rendered necessary.

Witnesses may be summoned.

Witnesses may be summoned to give evidence before either House, or before committees of the Council or Assembly, the necessary powers for compelling their attendance having been conferred by an Act passed in 1881. Any person disobeying a summons may be arrested on a Judge's warrant, and the maximum penalty for refusing to give evidence is imprisonment for one calendar month.

No limit to numbers of Council.

As regards the maximum number of members of the Legislative Council no limit is assigned by the Constitution Act, although the minimum number is fixed at twenty-one. It will be seen that this gives power to a Governor to quash any possible obstruction on the part of the Council to the will of the Government, and the Lower House by "swamping" the Council. Such a proceeding, however, can hardly be held to be allowable, except under extreme circumstances. As a matter of fact, an attempt to "swamp" the Council was made during one of the premierships of the late Sir Charles Cowper, but public opinion condemned the course most strongly, although the somewhat peculiar circumstances of the case were thought at the time to justify the Governor's action. The authorities in England severely rebuked the Governor (Sir John Young) for the course he had taken, and since then, "swamping" the Council has never been seriously entertained, nor is there much chance that it will ever again be attempted. The principle in fact has been affirmed, on the basis of an understanding entered into between Sir John Young and the leading statesmen of the day (of both sides of the House), that the members of the Legislative Council should be limited to a convenient number, and that no nominations should ever be made merely for the purpose of strengthening the party which happens to be in power. A deadlock between the two Houses is provided against by the universal feeling that the Assembly represents the will of the people, and in such case the Council would certainly have to give way to the deliberate will of the people's representatives. The Council is intended as a check to hasty legislation; and it doubtless acts as a useful "brake" to violent party feeling.

THE LEGISLATIVE COUNCIL.

Constitution of the Legislative Council.

As before stated, the members of the Upper House are nominated by the Governor, the minimum number composing the House being fixed at twenty-one. No limit as to numbers is fixed by the Constitution Act, but in accordance with the arrangement already described the number is practically kept down by the exclusion of all purely political appointments. As the number of members of the Assembly has been greatly increased in pursuance of the "expansion" clauses of the Act, the present number of members composing the Council (seventy-four) will not be considered an unfair proportion, as the increase is in about the same ratio as that of the Assembly. The members must be of full age, and either natural-born or duly naturalized subjects of the empire. Four-fifths of the members must be persons not holding any paid office under the Crown, but this is not held to include officers "in Her Majesty's sea and land forces on full or half pay, or retired officers on pensions." Though the appointment is for life, a member may resign his seat, and he also forfeits it by absence from two consecutive sessions without leave, by becoming naturalized in a foreign State, by becoming bankrupt, by becoming a public contractor, or defaulter, by being attainted of treason, or being convicted of felony, or any infamous crime. The Governor appoints and removes, if considered necessary, the President, who may speak in debate, but can only give a casting vote. An attendance of one-third of the members on the roll was necessary to constitute a quorum, but an Act has since been carried to reduce the proportion to one-fourth. The Council must hold a sitting at least once in every year, and no greater interval than twelve months must elapse between session and session. The proceedings are regulated by standing orders, which are, in the main, similar to those of the Assembly, the latter being framed on the model of the rules obtaining in the House of Commons. No member may sit or vote till he has taken the oath of allegiance, or the affirmation prescribed in lieu of that oath.

Members may resign.

Quorum.

THE LEGISLATIVE ASSEMBLY.

The Lower House of Parliament is elected by manhood suffrage, all natural born or naturalized male subjects of the full age of twenty-one years being entitled to vote, the number of electorates being at present seventy-four, returning 141 members. The qualification of electors is derived either from actual residence in an electorate or ownership of a freehold or leasehold therein. The following are the rules applying to each of the two cases:—

Qualification of electors.

1. Any person claiming a right to have his name on the electoral roll in respect of residence must prove that at the time of the collection of the roll he resided in the electorate in question, and had done so for six months previously.

Property qualification.

2. Any person who claims in respect of property must show that at the time the electoral list was made up, and during the preceding six months:—

(*a.*) He is and has been holder of a freehold or leasehold estate of the clear value of £100, or

(*b.*) He is and has been in the receipt of rents and profits of the annual value of £10, arising from freehold or leasehold property, or

(*c.*) Occupies and has occupied a house, warehouse, office, shop, room, or building, either with or without land attached, of the annual value of £10, or

(*d.*) Holds and has held a Crown lease or license for pastoral purposes within the electoral district.

The six months occupation is not required to be of the same premises, provided he has occupied continuously several sets of premises of the required value he is entitled to vote.

A man must be possessed of one or other of the above qualifications to entitle him to vote in any electorate; but he can only have one vote in each electorate, no matter how many qualifications he has in that electorate. If he is qualified in several electorates he is entitled to have his name on the electoral roll in each.

Disabilities.

A person is disabled from voting by reason of the existence of any of the following disqualifications at the time of making out the electoral roll:—

1. Being of unsound mind.
2. Being in receipt of eleemosynary aid.
3. Having been convicted of treason, felony, or other infamous crime, unless he has either received a free or conditional pardon, or has served his sentence.
4. Being in the military or naval service on full pay. Membership in a volunteer or militia corps does not disqualify.
5. Being a police magistrate or member of the police force (including the Inspector-General).

"Expansion clauses" of Electoral Act.

The "expansion clauses" of the Act, as they are called, provide that when an electorate which has previously returned only one member has 3,000 names on its electoral roll, or when one which returns two members is possessed of 5,000 voters, or one which returns three has reached 8,000, such electorate, in each case, is entitled to return an additional member; but the Governor must first notify the fact by proclamation in the *Gazette*.

Qualification for member of Assembly.

Any natural born or duly naturalized subject of Her Majesty is capable of being elected a member of the Assembly, subject to the same disqualifications as for voters, with the following additional ones:—

1. He must not be a member of the Legislative Council.
2. He must not hold any office of profit under the Crown, either for a term of years or during pleasure.
3. He must not be in any way interested in any contract for the public service.

Offices of profit.

By the "Constitution Act Amendment Act of 1884" the disqualification of persons holding office of profit was declared not to apply to the Colonial Secretary or other member of the Ministry. The third disqualification also does not apply to any contract made by a company consisting of more than twenty persons. If any disqualified person should be elected the election is voided by the House, and should such person presume to sit or vote he is liable to a fine of £500.

Payment of Members.

By an Act, assented to on the 21st September, 1889, members of the Assembly are allowed the sum of £300 per annum to reimburse them for expenses incurred in the discharge of their Parliamentary duties.

Members must take oath of allegiance.

Before taking his seat each member must take the oath of allegiance in the prescribed form, or make an affirmation in lieu of it. A member may resign his seat at any time, and he is held to have vacated it under any of the following conditions :—Absence during a whole session without leave, naturalization in a foreign country, bankruptcy, being a defaulter, or convicted of treason, felony, or any other infamous crime.

Parliament triennial.

The Act 37 Vic., No. 7, provides that no Assembly can prolong its existence beyond the term of three years. One session, at least, must be held every year, and twelve months must not elapse between any two sessions. On meeting after a general election, the first business is to elect a Speaker, who has only a casting vote. Twenty of the members (exclusive of the Speaker) constitute a quorum.

Writs.

Writs for general elections must be made returnable not later than thirty-five clear days after the date of the proclamation dissolving the former Parliament. Writs for general elections, and also for vacancies occurring between a general election and the meeting of Parliament for the despatch of business, are issued by the Governor. For all other elections the writs are issued by the Speaker, unless absent from the Colony, or unless no Speaker has yet been elected, when the Governor signs these writs in like manner to the others.

Election is by ballot.

Election is by ballot, the names of those entitled to vote being compiled once a year and published for general information.

Meeting of first Parliament.

The first Parliament elected under the Constitution Act met on the 22nd May, 1856, just six months after the proclamation of

Duration of Parliament.

the Constitution. Its duration, unless Parliament should be previously prorogued, was originally fixed at five years, but in 1874 an Act was passed establishing triennial Parliaments, which has ever since remained law. Since the inauguration of Responsible Government there have been fifteen appeals to the people, so that it will be seen the duration of each Assembly has not averaged even the shorter period of life to which its existence is now limited. The subjoined table gives the duration of each Parliament elected under Constitutional Government.

Duration of Parliaments since the Establishment of Responsible Government.

Parliament.	Opened.	Dissolved.	Duration.			No. of Sessions.
			Yr.	mth.	dy.	
First	22 May, 1856 ...	19 Dec., 1857 ...	1	6	27	2
Second	23 March, 1858 ...	11 April, 1859 ...	1	0	19	2
Third	30 Aug., 1859 ...	10 Nov., 1860 ...	1	2	11	2
Fourth	10 Jan., 1861 ...	10 Nov., 1864 ...	3	10	0	5
Fifth	26 Jan., 1865 ...	15 Nov., 1869 ...	4	9	22	6
Sixth	27 Jan., 1870 ...	3 Feb., 1872 ...	2	0	7	3
Seventh......	30 April, 1872 ...	28 Nov., 1874 ...	2	6	29	4
Eighth	27 Jan., 1875 ...	12 Oct., 1877 ...	2	8	15	3
Ninth	27 Nov., 1877 ...	9 Nov., 1880 ...	2	11	13	3
Tenth	15 Dec., 1880 ...	23 Nov., 1882 ...	1	11	8	3
Eleventh	3 Jan., 1883 ...	7 Oct., 1885 ...	2	9	4	6
Twelfth	17 Nov., 1885 ...	26 Jan., 1887 ...	1	2	9	2
Thirteenth..	8 March, 1887 ...	19 Jan., 1889 ...	1	10	11	3
Fourteenth..	22 Feb., 1889 ...	6 June, 1891 ...	2	3	15	3
Fifteenth ...	14 July, 1891 ...	....	....			...
		Average	2	2	6	3 to 4

Interest displayed in elections.

The amount of interest displayed by the electors in the exercise of their franchise is very considerable, though the proportion of votes recorded may not appear to sustain this view. At the general election of 1891 the total number of voters on the electoral rolls was 305,456, or 10 voters to every 36 persons in the community. In seven electorates, with 19,559 electors, returning seven members, there were no contests. The remaining 67 electorates, returning 134 members, comprised 285,897 electors, and of these only 184,091, or 64·4 per cent., recorded their votes.

Large area of electorates.

Owing to the vast extent of some of the electoral districts many electors can only record their votes at considerable inconvenience to themselves, and to this cause, combined with the fact that the number of non-resident voters is very considerable, must be assigned the apparently low percentage of votes recorded.

Proportion of population eligible to vote

The number of males of full age, compared with the total population, is very large, the proportion at the last census being 29 per cent. The number of persons entitled to vote under the system of universal suffrage which prevails amounts to nearly 27 per cent. of the total population, there having been 314,156 persons on the electoral roll for 1892–93. The average number of electors per member at the time of the last general election in 1891 was 2,166, and the estimated population to each member was 8,044. The subjoined table gives the result of all the general elections which have taken place under Representative Government :—

Parliamentary Elections.

No. of Parliament.	Voters on Roll.	No. of Electors to a Member.	Total number returned.	Members unopposed.	Votes on Roll in the Electorates where the contests took place.	Votes recorded.	Percentage of Votes recorded.	Informal Votes.	Percentage of Informal Votes.
First	44,526	825	54	*	*	*	*	*	*
Second	72,177	1,002	72	14	54,896	27,894	50·81	*	*
Third	88,346	1,227	72	19	63,022	27,490	43·62	22	·08
Fourth	106,189	1,475	72	19	75,676	28,340	37·45	29	·10
Fifth	119,872	1,665	72	15	90,736	44,311	48·84	31	·07
Sixth	128,734	1,788	72	11	108,080	56,331	52·12	102	·18
Seventh	151,798	2,108	72	8	125,488	60,004	47·82	80	·13
Eighth	160,843	2,234	72	10	104,575	57,651	55·13	334	·58
Ninth	160,945	2,205	73	16	120,698	62,172	51·51	*	
Tenth	188,500	1,745	108	14	140,848	90,657	64·36	1,785	1·97
Eleventh	196,289	1,737	113	17	166,260	96,842	58·26	2,002	2·07
Twelfth	232,190	1,900	122	8	203,669	124,378	61·07	2,564	2·06
Thirteenth	256,406	2,068	124	17	226,228	131,062	57·93	2,275	1·73
Fourteenth	280,160	2,045	137	13	257,763	154,924	60·10	2,641	1·70
Fifteenth	305,456	2,166	141	7	285,897	184,091	64·39	3,642	2·02

* Unrecorded.

The Federation Question.

At the present crisis of affairs a notice of the constitution and Government of the Colony would be incomplete without some reference to the question of Australian Federation, which is now more prominently before the public than it has been at any previous stage of Colonial history. It has already been shown, in the initial chapter of this work, that the question was not overlooked by the framers of the first free Australian Constitution, who proposed the establishment of a General Assembly "to make laws in relation to those intercolonial questions that have arisen, or may hereafter arise," and who, in fact, sketched out a tolerably comprehensive federation scheme. Unfortunately, however, that proposition was included with another for the creation of hereditary nobility, and in the storm of opposition and ridicule with which the latter idea was greeted, the former sank out of sight. From time to time since Responsible Government came into being the evil of want of union among the Australian Colonies has been forcibly apparent, and the idea of federation has gradually become more and more popular among the people. Some years ago the movement took such shape that, as the result of an intercolonial conference, the matter came before the Imperial Parliament, and a measure was passed, permitting the formation of a Federal Council, to which any colony that felt inclined to join could send delegates. The first meeting of that Federal Council was held at Hobart, in January, 1886. The Colonies represented were Victoria, Queensland, Tasmania, Western Australia, and Fiji. New South Wales, South Australia, and New Zealand declined to join, but South Australia sent representatives to a subsequent meeting. The Council has held four meetings, at which several matters of intercolonial interest were discussed; but, as from its very inherent constitution, it was only a deliberative body, having no executive functions whatever, it possessed no control of funds or other means to put its legislation into force. The advocates of Federation were therefore dissatisfied with the position the question was in, and agitation was instituted with a view of bringing about a more satisfactory state of things.

Federal Council.

Federation Conference.

An important step towards the federation of the Australasian Colonies was taken in February, 1890, when a Conference, consisting of representatives of each of the seven Colonies of

Australasia, was held in the Parliament House, Melbourne. The Conference met on February 6, and there were thirteen members present, being two representatives from each of the Colonies, except Western Australia which sent only one, Sir Henry Parkes, Premier and Colonial Secretary, and Mr. W. McMillan, Colonial Treasurer, representing New South Wales. Mr. Duncan Gillies, Premier of Victoria, was elected President of the Conference. The members held seven meetings, and discussed the question before them at considerable length. At the last meeting the Conference adopted an address to the Queen, expressing their loyalty and attachment, and enclosing certain resolutions as the result of the Conference, which affirmed the desirableness of an early union, under the Crown, of the Australian Colonies, on principles just to the several Colonies; that the remoter Australasian Colonies should be entitled to admission upon terms to be afterwards agreed upon; and that steps should be taken for the appointment of Delegates to a National Australasian Convention, to consider and report upon an adequate scheme for a Federal Constitution.

Address to the Queen.

National Australasian Convention.

In accordance with the terms of that resolution Delegates were appointed by the different Australasian Parliaments, and on the 2nd March, 1891, the National Australasian Convention commenced its sittings in the Legislative Assembly Chambers, Macquarie-street, Sydney, having been convened at the instance of Mr. James Munro, the Premier of Victoria. There were forty-five Members of the Convention altogether, New South Wales, Victoria, Queensland, South Australia, Tasmania, and Western Australia (which had only recently been placed in possession of the privilege of Responsible Government), each sending seven Delegates, and New Zealand three. At the first meeting of the Convention the seven Delegates from Western Australia were absent, as well as three other Delegates representing Victoria, Queensland, and New Zealand respectively, but in the course of a few days the whole of Delegates arrived, and the Convention was complete.

Proceedings of the Convention.

The first business transacted by the Convention was the unanimous election of Sir Henry Parkes as President. Mr. F. W. Webb, Clerk of the Legislative Assembly of New South Wales, was appointed Secretary to the Convention, and Sir Samuel Griffith was elected Vice-President. Mr. J. P. Abbott, Speaker of the New South Wales Legislative Assembly, was subsequently elected Chairman of Committees. Rules of Procedure, similar in the main to those under which the business of Parliament is conducted, were adopted, and arrangements were made for the admission of the public to the debates, and for the publication of an official record of the proceedings.

Resolutions adopted.

A series of resolutions was moved by Sir Henry Parkes, setting forth certain principles necessary to establish and secure an enduring foundation for the structure of a Federal Government, and approving of the framing of a Federal Constitution. These resolutions were discussed by the Convention during nine sittings, part of the time in Committee of the Whole, and after amendment were finally adopted. The resolutions affirmed the following principles:—

1. That the powers and rights of existing Colonies shall remain intact, except as regards such powers as it might be necessary to hand over to the Federal Government.
2. That no alteration shall be made in States without the consent of the Legislatures of such States, as well as of the Federal Parliament.
3. Trade between the federated Colonies to be absolutely free.
4. Power to impose Customs and Excise Duties to be in the Federal Government and Parliament.
5. Military and Naval Defence Forces to be under one command.
6. The Federal Constitution to make provision to enable each State to make amendments in its constitution if necessary for the purposes of Federation.

Federal Constitution.

Further resolutions approved of the framing of a Federal Constitution which should establish a Senate and a House of Representatives—the latter to possess the sole power of originating money bills; also a Federal Supreme Court of Appeal; and an Executive consisting of a Governor-General, with such persons as may be appointed as his advisers.

Adoption of the Constitution.

Three Committees were then chosen among the Delegates—one to consider matters relating to Finance, Taxation, and Trade Regulations; a second to deal with the establishment of a Federal Judiciary; and the third to prepare and submit a Bill for the establishment of a Federal Constitution. On Tuesday, March 31, Sir Samuel Griffith, as Chairman of the Committee on Constitutional Machinery, brought up a draft Constitution Bill, which was fully and carefully considered by the Convention in Committee of the Whole, and was adopted on Thursday, April 9. On the same day the Convention was formally declared to be dissolved, and it now remains for the Colonies individually to adopt or reject the scheme presented to them by the Convention.

PART XVII.

Instruction, Science, and Religion.

PRIMARY EDUCATION.

Early system of subsidies.

THE history of primary education in New South Wales is naturally divided into four periods. During the first period, which lasted until 1848, the system in force was purely denominational, the Government granting to the heads of religious bodies assistance in proportion to the amount expended by them for educational purposes. No provision was made for the establishment of schools entirely under State control, and considerable dissatisfaction was the result. As early as 1834 attempts were made to modify the system in force, and five years later a grant was made with the object of securing undenominational education for the children of those who preferred it. It was not, however, until 1844 that any definite steps were taken in this direction. In that year a Committee of the Legislative Council reported in favour of the adoption of the Irish National School system, and, in accordance with this recommendation, an Act was passed in 1848 constituting two Boards, to one of which was entrusted the administration of denominational education, and to the other the undenominational, or, as it was called, the National system. This anomaly of two rival Boards existed for eighteen years, until it was abolished by the passing of the Public Schools Act of 1866. This Act provided for two distinct classes of schools, though all schools receiving aid from the State were placed under the control of a Board appointed by the Government, and styled the Council of Education. The Public Schools were entirely

First grant in aid of undenominational education.

The Public Schools Act of 1866.

administered by this Board, but the denominational schools were partly governed by the various religious bodies by whom they had been founded. Although the system established by the Act of 1866 was essentially one of transition, education nevertheless made considerable progress during the years of its administration. But it was found impossible to maintain this dual system, not only on account of its intrinsic defects, but because the principle of granting State aid to religious schools was repugnant to the feelings of the majority of the people.

State aid to denominations abolished.

In 1880 State aid to denominational education was abolished. By an Act passed under the auspices of Sir Henry Parkes, which received the Royal assent on the 16th April, 1880, the entire educational system of the Colony was remodelled. The Act, in the first place, repealed the Education Act of 1866, dissolved the Council of Education, and placed the control of educational matters in the hands of the Minister of Public Instruction. It provides for the establishment and maintenance of Public Schools, to afford primary instruction to all children without sectarian or class distinction; Superior Public Schools, in which additional lessons in the higher branches may be given; Evening Public Schools, with the object of instructing persons who may not have received the advantages of primary education; and High Schools for boys and girls, in which the course of instruction shall be of such a character as to complete the Public School curriculum, or to prepare students for the University. It provides that in all schools under the Act the teaching shall be strictly non-sectarian; but the words "secular instruction" are held to include general religious teaching, as distinguished from dogmatical or polemical theology. The History of England and of Australia are to form part of the course of secular instruction; and it is further provided that four hours during each school day shall be devoted to secular instruction exclusively, but one other hour each day may be set apart for religious instruction, to be given in a separate class-room by the clergyman or religious teacher of any persuasion, to the children of the same persuasion whose parents do not

Minister of Public Instruction.

Primary instruction.

Secondary education.

Secular instruction.

Religious instruction.

object to their receiving such religious instruction. This provision has been taken advantage of to some extent by several of the denominations.

Education compulsory.

It is made compulsory upon parents to send their children, between the ages of six and fourteen years, to school for at least seventy days in each half-year, unless just cause of exemption can be shown. Penalties are provided for breaches of this provision. But although education is compulsory, it is not altogether free, for parents are required to pay a weekly fee of three pence per child, but not exceeding one shilling in all for the children of one family. Power is given, however, to the Minister, or the Local Board, to remit the fees where it is shown that the parents are unable to pay. The fees, except in Evening Schools, are not the property of the teacher, but are paid into the Consolidated Revenue Fund. Children attending school are allowed to travel free by rail.

Weekly fee.

Provisional Schools.

Other sections of the Act permit of the establishment of Provisional Schools, and the appointment of itinerant teachers in remote and thinly-populated districts. Provision is also made for the establishment of training schools for teachers. It is enacted that Local Boards shall be appointed, whose duty is to visit and inspect the Public Schools placed under their supervision, to suspend teachers in cases of misconduct not admitting of delay, and to endeavour to induce parents to send their children regularly to school, and to report the names of parents or guardians who refuse or fail to educate their children. It should be observed that parents are not compelled to send their children to the Public Schools; they have full choice in the matter, the State only insisting that a certain standard of education shall be attained.

Local Boards.

Progress of education.

Great as has been the material progress of the Colony, its intellectual advancement has been much more rapid. At the Census of 1881, out of the 751,468 persons enumerated, there were 195,029, or very nearly 26 per cent., unable to read; at the

Census of 1891, out of a population (exclusive of aborigines) of 1,123,954 persons, only 244,398, or 21·7 per cent., were returned as unable to read. Included in the number just given, there were 165,781 children of four years of age and under, so that there were only 78,617 persons, or 7 per cent. of the population five years of age and over, who were unable to read—a very small proportion when it is remembered that this number includes Chinese, Polynesians, and others. Another gauge of educational progress will be found in the records of the marriage registers signed by marks. The earliest official record of marriages was for the year 1857, when out of 5,804 persons married 1,646 or 28·4 per cent. were unable to sign the marriage register. During 1891 the number of such persons was only 521, or 3·1 per cent. of the total number married. A generation has passed away during the period embraced by the following table, and the progress shown thereby cannot fail to be interesting.

Year.	Persons married.	Percentage signing with marks.	Number signing with marks.	Year.	Persons married.	Percentage signing with marks.	Number signing with marks.
1857	5,804	28·4	1,646	1884	14,964	5·2	783
1860	5,890	26·5	1,559	1885	15,236	4·7	723
1865	7,156	22·1	1,579	1886	15,622	4·0	622
1870	7,696	18·2	1,403	1887	15,180	3·5	531
1875	9,210	12·3	1,129	1888	15,688	3·7	587
1880	11,144	6·7	743	1889	15,060	3·4	504
1881	12,568	6·9	872	1890	15,752	2·7	426
1882	13,896	5·6	782	1891	16,914	3·1	521
1883	14,810	6·1	903				

Marvellous progress of education.

The progress exhibited in the above table is marvellous. The residuum of population not yet educated is already very small, and, moreover, of the 521 persons using marks a large proportion were not born in New South Wales, but arrived in this Colony too late in life to avail themselves of its educational system. The proportion of persons using marks is somewhat higher in this Colony and Queensland than in any other member of the group. This is in no sense due to any defect in the educational system of those colonies, but rather to the number of immigrants attracted thither, amongst whom there will always be found many persons unable to write.

Illiteracy in other Colonies.

Figures respecting all the colonies are not available, but as regards those that have furnished returns in the year 1891 the degree of illiteracy, as disclosed by the marriage registers, was :—

	Percentage signing with marks.
New South Wales	3·0
Victoria	1·4
Queensland	3·4
South Australia	1·9
New Zealand	1·5

Children instructed in former years.

Only an imperfect comparison can be made as to the number of children under instruction during past years, as the number in actual attendance cannot be distinguished from the number enrolled. The following table, however, gives the number of schools, both public and private, including the University, and enrolled scholars for fifty-six years, and though it cannot be taken as absolutely correct, it may be relied on as fairly indicative of the educational progress of the Colony. Victoria, it should be remembered, was separated in 1851, and Queensland in 1861 :—

Year.	Population of the Colony.	No. of schools.	Children enrolled.	Proportion of population enrolled.
				per cent.
1836	77,096	85	3,391	4·4
1841	149,669	209	9,632	6·4
1846	196,704	394	19,033	9·7
1851	197,168	423	21,120	10·7
1856	286,873	565	29,426	10·3
1861	357,978	849	37,874	10·6
1866	428,813	1,155	59,594	13·9
1871	517,758	1,450	77,889	15·0
1876	614,181	1,629	131,620	21·4
1881	778,690	2,066	197,412	25·4
1886	989,340	2,833	226,860	22·9
1891	1,165,300	3,175	252,947	21·7

The number of children given in the preceding table as enrolled in the various schools exceeds, in almost every case, the actual school attendance, as the gross enrolment for the year is given, and not the mean for each quarter. The latter information cannot be obtained except for recent years, but the figures as they stand give a basis of comparison, which is not without value.

Enrolment of children.

The following table shows the gross enrolment of distinct children during the ten years which closed with 1891, as well as the quarterly enrolments, in the public and private schools of the Colony, omitting the University. The last column may be taken as giving the nearest approximation to the number of children actually under tuition in State and private schools :—

Year.	Schools.	Teachers.	Scholars.		
			Gross enrolment.	Mean quarterly enrolment.	Percentage of children of School age attending School.
1882	2,149	4,080	208,887	184,269	92·7
1883	2,303	4,460	187,931	162,312	78·2
1884	2,523	4,776	200,741	172,766	79·5
1885	2,657	5,182	216,896	182,537	80·5
1886	2,817	5,564	224,892	192,010	81·4
1887	2,925	5,714	224,510	197,712	81·3
1888	2,950	5,767	226,856	201,083	80·7
1889	3,073	5,886	232,840	206,326	80·9
1890	3,120	6,574	237,853	212,969	81·3
1891	3,161	7,028	250,691	223,296	82·6

In the gross enrolment just given for 1891 the 1,320 children in reformatories, industrial schools, and charitable institutions are not included; but should these be taken into account there will be 83·1 per cent. of all the children of school age receiving instruction in schools. The number of children at various age periods enrolled in State and private schools during 1891 was :—

Age Period.	State Schools.	Private Schools.	Total.
Under 6	22,623	6,763	29,386
6 and under 15	169,470	32,884	202,354
15 and over............	13,580	5,371	18,951
Total	205,673	45,018	250,691

Number of children of school age.

The provisions of the Public Instruction Act are compulsory only in regard to children between the ages of 6 and 14 years, but as the actual enrolment at schools comprises children of 5 and under 15 years that period has been adopted as school age for the purposes of these tables. According to the Census of 1891 the number of children of school age in New South Wales was 266,000, of whom 252,000 were receiving instruction in public and private schools and public institutions, excluding the University and colleges. Of these 205,673 were on the rolls of State schools, and the remainder were distributed among the various private and denominational schools, reformatories, and charitable institutions, while about 14,000 were either receiving no instruction, or were being taught at home. No reliable estimate of the number of children under home tuition can be made, neither is it possible to determine the number of those who have ceased to attend school before reaching their fifteenth year, but it is very probable that considerable numbers are to be found in both classes. The total known enrolment at private schools was 45,018 and the average attendance, 35,561.

Compulsory clauses not strictly enforced.

Owing to the sparseness of the population in nearly all the country districts of the Colony, the compulsory clauses of the Instruction Act cannot be strictly enforced. Nevertheless, the number of children growing up in absolute ignorance is by no means great, and, though the proportion of such children cannot be even approximately determined, there is sufficient evidence to warrant the conclusion that it is steadily decreasing. At the census periods of 1861, 1871, 1881, and 1891, the proportions of children from 5 and under 10 years who could read and write were in every ten thousand as follows:—

	1861.	1871.	1881.	1891.
Read and write	2,355	3,470	4,413	5,377
Read only	3,289	2,752	1,982	1,368
Unable to read	4,356	3,778	3,605	3,255

Taking the children from 10 and under 15 years, the comparison is still more satisfactory:—

	1861.	1871.	1881.	1891.
Read and write	6,769	7,666	8,804	9,705
Read only	1,854	1,292	614	143
Unable to read	1,377	1,042	582	152

Progress of education amongst children.

The steady decrease in the proportion of illiterate children from 1861 to 1871, and from 1871 to 1881, is plainly visible from the above tables, and the Census of 1891 shows that this satisfactory decrease has since continued.

PUBLIC INSTRUCTION—STATE SCHOOLS.

Schools when present Act came into force.

When the present Public Instruction Act came into operation, on the 30th April, 1880, the Council of Education ceased to exist, and handed over to the new administration the schools, until then under its control. At the date mentioned, there were maintained, or subsidized by the Government, 1,220 schools, attended by 101,534 scholars, thus distributed :—

	No. of Schools.	No. of Pupils.
Public	705	68,823
Provisional	313	8,312
Half-time	97	1,683
Denominational	105	22,716
	1,220	101,534

At the close of 1882 the connection of the denominational schools with the State ceased, and the subsequent year is marked, as was to have been expected, by a considerable falling off in the number of children who were receiving their education at the expense of the State. The check only operated for a short period, as the year 1884 showed a recovery of more than the ground lost. This will be seen by the following table which shows the enrolment and attendance of children at State supported schools only :—

Enrolment since passing the Act.

Year.	Gross enrolment of distinct children.	Quarterly enrolment.	Average attendance.
1882	159,490	134,872	90,944
1883	155,824	130,205	88,546
1884	167,134	139,159	95,215
1885	180,929	146,570	100,462
1886	179,990	153,244	105,538
1887	184,060	157,262	106,408
1888	186,692	160,919	112,220
1889	191,215	164,701	114,569
1890	195,241	170,357	116,665
1891	205,673	178,278	122,528

Increase in enrolment.

Since the withdrawal of aid from denominational schools the increase in the average quarterly enrolment at State schools has been 32·2 per cent. In 1883 there was a decrease of 3·6 per cent.; the increase in each year since was :—

1884	6·9 per cent.
1885	5·3 ,,
1886	4·6 ,,
1887	2·6 ,,
1888	2·3 ,,
1889	2·4 ,,
1890	3·4 ,,
1891	4·6 ,,

Number of schools.

The number of schools under the direct control of the Department, during 1891, was 2,457, thus classified :—

High Schools	5
Public Schools—mixed	1,567
,, Two departments	52
,, Three or more departments	78
Provisional Schools	349
Half-time Schools	300
House-to-house Schools	92
Evening Schools	14
Total	2,457

State Schools in Australasian Colonies.

The following table gives the number of State schools in each of the Australasian Colonies, together with the number of scholars in average attendance :—

Colony.	Number of Schools.	Number of Teachers.	Number of Scholars. [Average Attendance.]	Average attendance of Pupils per School.
New South Wales	2,457	4,427	122,528	50
Victoria	2,237	4,750	140,318	63
Queensland	639	1,504	45,004	70
South Australia	552	1,106	29,801	54
Western Australia	87	133	2,630	30
Tasmania	244	474	9,680	40
New Zealand	1,255	3,065	97,058	77
Australasia	7,471	15,459	447,019	60

Number of Teachers.

The teachers in New South Wales during the year numbered 4,427, viz., 2,223 males, and 2,204 females.

	Males.	Females.	Total.
In charge of departments	1,564	881	2,445
Assistants	153	433	586
Pupil-teachers	432	764	1,196
Others	18	81	99
Students in training	56	45	101
Total	2,223	2,204	4,427

The average number of pupils on the basis of the mean quarterly enrolment per teacher was, therefore, 40·3, and the average attendance per teacher, 27·7, while the average quarterly enrolment of children per school was 72·6.

Public School curriculum.

The curriculum of the public schools of New South Wales provides merely for imparting to children a sound course of primary education, and the elements of those sciences which form the basis of higher courses of education, scientific or technical. The State provides separately the necessary facilities for acquiring technical knowledge, under a system of training recently introduced, about which more will be said further on. The Kindergarten system has been introduced fully into five of the schools, and partially into thirteen others, and about 3,000 children are receiving this kind of instruction.

Training of Teachers.

The supply of teachers is obtained from three sources—the two training colleges; ex-pupil teachers who do not enter a training college; and young persons, not less than 18 years of age, who have been mostly educated in the Public Schools of the Colony, and who undergo a short course of training under qualified teachers. Few teachers trained outside the Colony find employment under the department. At the Fort-street Training School for males 56 students attended the course of training during the year. It is proposed to erect a residential college for the training of male students within the University, and plans for the necessary buildings have been prepared and approved of. There will be accommodation for 50 students, with lecture and class rooms, dining-hall, dormitories, &c., and a residence for the Principal.

The cost is estimated at £37,500. At the Hurlstone Training School for female students there were 45 training during the year The pupil-teachers in the service during the year numbered 1,196 of whom 432 were males, and 764 females. The pupil-teachers are carefully selected, and are taken on probation for three months before they are permanently employed, and then, if approved, they have to serve a term of four years, when if they are successful in passing the necessary examinations they may enter one of the Training Schools.

Teachers and their emoluments.

During the year 1891 the number of teachers in the service of the Department of Public Instruction was, as already stated, 4,427 The teachers obtain promotion only after passing a series of examinations, which are so framed as to efficiently test their progress in general capacity. There are ten classes of male teachers in charge of schools or departments, their emoluments ranging from £128 to £500 per annum including residence; unclassified teachers in charge of Provisional Schools receive from £72 to £96; assistant teachers are paid at rates varying from £150 to £250; and pupil-teachers from £42 to £72 per annum. Female teachers in charge of schools or departments are paid from £218 to £326 per annum, including value of residence; assistant teacher's salaries vary from £114 to £168; and pupil teachers receive from £24 to £48 per annum. Work mistresses' salaries range from £90 to £120 per annum.

Public School Boards.

The local supervision of the Public Schools of the Colony is placed in the hands of School Boards appointed in the various districts of the Colony, under the provisions of the Public Instruction Act. These boards are supposed to exercise a general oversight in regard to the Public Schools in their districts, but cannot interfere with the internal discipline or management of the schools, which remain under the direct control of the Minister of Public Instruction, and the inspectors and other officers of his department.

Average cost of education per scholar.

The average cost per child in average attendance at the Public Schools has greatly varied, as will be seen by the following table, which gives the averages for the ten years, 1882 to 1891, inclusive :—

Year.	For school premises.	For the maintenance of schools.	For administration, including the amount paid as retiring allowances.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1882	2 10 2¾	3 15 1¾	0 10 8¼	6 16 0¾
1883	4 8 3¾	4 2 0¼	0 15 3½	9 5 7½
1884	3 3 11	4 4 2¾	0 14 5¾	8 2 7½
1885	1 15 5¼	4 3 7	0 13 1¼	6 12 1½
1886	1 9 4½	4 1 6	0 13 1½	6 4 0
1887	1 2 6½	4 3 7½	0 11 3½	5 17 5½
1888	0 15 1	4 1 7¾	0 9 8½	5 6 5
1889	0 19 1½	4 2 6¼	0 9 3¼	5 10 11
1890	1 5 9½	4 5 3	0 9 8¼	6 0 8¾
1891	1 11 2¾	4 5 0½	0 9 4	6 5 7¼

Cost per child in other colonies.

In the Public Schools of New South Wales the cost per child was until 1888 higher than in the other Australian Colonies; the figures for 1891, however, show this Colony has now reduced its expenditure per child below that of Victoria, though it is still a little in excess of the other provinces. The following figures do not include cost of buildings :—

	Cost per child in average attendance.
New South Wales	£4 14 4½
Victoria	5 3 1¾
Queensland	3 18 2
South Australia	3 2 8¾
Western Australia	4 0 10¼
Tasmania	3 14 11¾
New Zealand	3 15 1¾

Expenses incidental to starting present Act.

The total cost per child in average attendance at the Schools under the control of the London School Board, in 1890, was £3 8s. 3d., and the net cost £2 1s. 8d., but no useful purpose is to be gained by comparing England and Australia in regard to cost of education, and in considering the expense incurred by the State in past years it should be borne in mind that a considerable outlay was needed to build the necessary school-houses after the Act of 1880 became law. Under this Act the expenses contingent upon the necessity of obtaining efficient results, in a country so sparsely populated as New South Wales, were unavoidably great. School-houses had to be built, teachers required training, and the whole machinery for providing schools and teachers had to be started in so many parts of the country where there were none but denominational schools, and frequently no educational establishments at all. To these initial expenses was due, in a great measure, the relatively high cost of public education in the earlier years shown in the table on the previous page. A reduction is observable since 1885, and it may be expected that the cost will not at any time greatly exceed the present figures, as the schoolhouses have been built with due regard to the increase in the number of scholars which must be expected in a young, prosperous, and growing colony. It may be added that most of the school-buildings are of such a character as would do credit to the most advanced countries in the world, the greatest care being taken to have them replete with all the improvements which the experience of centuries has suggested in older communities. It should, however, be mentioned here, that the report of the Minister for Public Instruction in 1890 stated that the expenditure on school-buildings during the previous seven years had been insufficient, and that a further large outlay would be required shortly in order to keep pace with the ever increasing demand for accommodation.

Comparative cost of education.

When comparing the average cost of education per child in attendance in New South Wales with that of its neighbour, Victoria, the results for 1891 must appear very satisfactory, especially when it is borne in mind that the smaller extent of the territory of the latter colony, and the greater travelling facilities, which a railway system proportionately much larger offers, must necessarily reduce the cost of education. In South Australia and Western Australia settlement is confined to certain districts in which the population is more compact, whilst the whole of the territory of New South Wales, if we except the extreme west, may be regarded as everywhere settled, at least to such an extent as to necessitate the extension of the Public School system throughout the greater part of the Colony. But the spread of public instruction is considered so pre-eminently important an object that the Legislature has at all times expressed its readiness to make every sacrifice, and spare no expense to render efficacious the system of national education which it adopted in 1880.

Amount expended on primary education

The following table will show the total amount expended by the State since the year 1882, and the annual amount per head of population provided for the primary education of the children of the Colony :—

Year.	Amount.	Per head of population.	Year.	Amount.	Per head of population.
	£	s. d.		£	s. d.
1882	618,800	15 6	1887	624,983	12 5
1883	821,853	19 8	1888	597,102	11 6
1884	774,357	17 6	1889	635,509	11 11
1885	663,697	14 4	1890	704,260	12 9
1886	654,411	13 6	1891	769,565	13 5

Details of expenditure on education.

This statement would not be complete if some details were not furnished, showing under what principal heads this expenditure was incurred, and the amount of school fees received during the same period. These details were :—

Year.	Number of Schools.	Gross enrolment of distinct Pupils.	On school premises.	On maintenance of Schools, including Administration, &c.	Total.	School Fees.	Net State Expenditure.
			£	£	£	£	£
1882	1,795	166,611	228,401	390,399	618,800	51,312	567,488
1883	1,706	155,918*	391,000	430,853	821,853	51,427	770,426
1884	1,912	167,134	304,383	469,974	774,357	56,766	717,591
1885	2,046	173,440	178,002	485,695	663,697	58,926	604,771
1886	2,170	179,990	155,072	499,339	654,411	63,165	591,246
1887	2,236	184,060	119,957	505,026	624,983	63,896	561,087
1888	2,271	186,692	84,575	512,527	597,102	69,554	527,548
1889	2,373	191,215	109,576	525,933	635,509	72,318	563,191
1890	2,423	195,241	150,441	553,819	704,260	71,827	632,433
1891	2,457	205,673	191,374	578,191	769,565	75,913	693,652

* Certified Denominational Schools were discontinued at the close of 1882.

School fees.

It will be seen that the amount directly contributed by parents towards their children's education is but a small proportion of the total cost. In 1891, however, the contributions of the parents was slightly larger than in the previous year, and was exceeded only in 1889, as may be seen from the following statement, which shows for ten years the cost to the State of the education of each child of average attendance, as well as the total cost, including the amount of fees received :—

Year.	Cost to State.	Total Cost.	Amount of Fees received.
	£ s. d.	£ s. d.	£ s. d.
1882	6 4 10	6 16 1	0 11 3
1883	8 14 0	9 5 7	0 11 7
1884	7 10 9	8 2 8	0 11 11
1885	6 0 5	6 12 1	0 11 8
1886	5 12 0	6 4 0	0 12 0
1887	5 5 5	5 17 5	0 12 0
1888	4 14 0	5 6 5	0 12 5
1889	4 18 4	5 10 11	0 12 7
1890	5 8 5	6 0 9	0 12 4
1891	5 13 2	6 5 7	0 12 5

Free scholars.

The number of free scholars during the year 1891 was 8,150; or 4,323 boys and 3,827 girls, equal to a percentage of 6·8 of the average attendance.

School savings banks.

In accordance with a design long contemplated, savings' banks were opened during 1887 in connection with the public schools of the Colony. At the close of 1891 there were 602 banks in operation, as compared with 554 at the close of 1890, and the deposits for the year amounted to £12,452. Of this amount £8,183 was withdrawn for current use, and £4,269 remained to the credit of the depositors. The object aimed at in establishing these banks is to inculcate practically the principles of economy, while yet the minds of the children are susceptible of deep impressions. A systematic training for this purpose is a thing to be desired in every public school, in order to engender habits of thrift amongst school children, to indoctrinate them as to the uses and effects of money that are ulterior to immediate gratifications, and to make them recognize and calculate upon poverty and degradation as the natural results of waste and improvidence.

DENOMINATIONAL AND PRIVATE SCHOOLS.

Attendance increasing.

The attendance at private schools has increased more than twofold since 1882. This is entirely due to the withdrawal of aid from denominational schools. At the close of the year mentioned there were 124 denominational schools under the control of the Education Department, with 346 teachers, and 29,651 scholars. Many of these schools ceased to exist immediately on the withdrawal of State aid, and the children by whom they were attended were transferred for the most part to the ordinary Public Schools of the Colony. Some of the schools, however, were still maintained, chiefly those connected with the Roman Catholic Church, and thenceforth appear in the returns as private schools. The increase in the number of private schools during 1883 was 97, and the increase in the attendance of children was 12,361, so that, at the lowest computation, 27 denominational schools were immediately closed, and 17,290 children transferred to Public Schools.

Increase in private schools.

The following table gives the particulars respecting private schools from 1882 to 1891, inclusive :—

Year.	Schools.	Teachers.	Scholars.	Year.	Schools.	Teachers.	Scholars.
1882	491	1,154	19,746	1887	689	1,873	40,450
1883	588	1,473	32,107	1888	679	1,854	40,164
1884	611	1,601	33,607	1889	700	1,884	41,625
1885	611	1,654	35,967	1890	697	2,393	42,612
1886	647	1,808	38,766	1891	704	2,601	45,018

Classification of private schools.

Dividing the private schools of the Colony into their respective classes, there were in operation during 1891 :—

	Schools.	Teachers.	Scholars.
Undenominational	399	1,119	10,507
Church of England	47	185	3,334
Roman Catholic	250	1,242	30,691
Wesleyan Methodist	4	31	261
Presbyterian	2	22	178
Congregational	1	1	6
Lutheran	1	1	41
Total	704	2,601	45,018

Subjects taught.

With regard to the subjects imparted to these 45,018 children, it appears that 18,993 boys and 23,617 girls were learning reading; writing was taught to 18,917 boys and 23,733 girls; and there were 18,087 boys and 22,654 girls receiving instruction in arithmetic, while 3,345 boys and 1,926 girls were students in other mathematics. Geography was taught to 13,167 boys and 18,615 girls; grammar to 12,944 boys and 17,925 girls; and history to 7,525 boys and 10,278 girls. The ancient languages were studied by 1,889 boys and 923 girls, while 2,217 boys and 3,105 girls were making themselves acquainted with modern languages. Drawing was taught to 7,140 boys and 10,694 girls, and music was studied by 4,031 boys and 8,072 girls. No less than 48 boys and 17,977 girls were being instructed in needlework.

Roman Catholic Schools.

Not a few of the schools returned as undenominational are religious schools, though no definite form of religious opinions is inculcated therein. Of distinctly religious schools, those of the Roman Catholic Church comprise the great majority, numbering nearly 82 per cent. of professedly denominational schools, and 88·9 per cent. of the scholars educated therein. The number of pupils attending these schools was not ascertained for the years preceding 1886. On the withdrawal of State assistance from denominational schools in 1882 there were in operation under the Department of Education, 75 Roman Catholic Schools, attended by 16,595 pupils, while in 1891 there were 250 schools, attended by 30,691 pupils. There were, however, some Roman Catholic Schools prior to 1882 not receiving aid from the State, and, on the other hand, some of the schools which were closed in 1882 have not since been opened. The following are the figures for the six years for which returns are available :—

Year.	Schools.	Teachers.	Scholars on Roll.			Average Attendance.		
			Males.	Females.	Total.	Males.	Females.	Total.
1886	215	896	11,222	13,798	25,020	9,533	11,766	21,279
1887	238	897	12,518	14,474	26,992	10,158	12,108	22,266
1888	247	916	12,535	14,637	27,172	10,010	11,799	21,809
1889	267	996	13,674	14,872	28,546	10,785	11,977	22,762
1890	244	1,112	13,021	15,531	28,552	10,206	12,225	22,431
1891	250	1,242	13,837	16,854	30,691	10,547	13,241	23,788

Church of England Schools.

The Church of England is the only other religious body maintaining schools of importance. During 1891 such schools numbered 47, and were attended by 3,334 pupils. At the end of 1882 there were in existence 42 Church of England Schools, with an enrolment of 11,927 children. The following table shows the state of these schools during the past six years :—

Year.	Schools.	Teachers.	Scholars on Roll.			Average Attendance.		
			Males.	Females.	Total.	Males.	Females.	Total.
1886	56	143	1,794	1,579	3,373	1,662	1,346	3,008
1887	73	167	1,815	1,514	3,329	1,588	1,258	2,846
1888	66	154	1,548	1,552	3,100	1,272	1,242	2,514
1889	47	115	1,353	1,302	2,655	1,065	999	2,064
1890	64	209	1,844	1,763	3,607	1,449	1,410	2,859
1891	47	185	1,917	1,417	3,334	1,475	1,037	2,512

HIGHER EDUCATION.

Curriculum of High Schools.

It has already been mentioned that the State has made provision for higher education, by the establishment of High Schools in the metropolis and the principal centres of population. The curriculum of these schools is of such a character as to enable students to complete the course of instruction, the basis of which they acquired in the Public Schools, and, if they so wish, to prepare themselves for the University examinations. Admission to these schools is by examination only. There were at the close of the year 1891 two High Schools for boys and three for girls; the gross enrolment for that year was 417 boys and 461 girls, making a total of 878 children. The average attendance was 642 as against 598 for the year 1890. During the year, 113 pupils passed the junior, 16 the senior, and 30 the matriculation examinations at the University.

Scholarships and bursaries.

A system of scholarships and bursaries for boys and girls at State schools has been brought into operation. Twenty of each—ten for each sex—are available for education at State, High, or Grammar Schools, and six bursaries for boys, and four for girls are tenable at the University. The former are awarded half-yearly, and the latter at the March matriculation examinations, after examination, to the most proficient pupils, in cases where the parents are unable to defray the expense of the pupil's education. Four candidates from the High Schools—one boy and three girls—were successful in obtaining bursaries at the University matriculation. For the State scholarships and bursaries 80 candidates were successful; 24 males and 24 females obtained scholarships for High Schools and Superior Schools, and 17 males and 11 females obtained bursaries for High and Superior Schools.

Superior Public Schools.

Superior Public Schools, in which the subjects taught embrace, in addition to the ordinary course prescribed for Public Schools, such other subjects as will enable the students to compete at the senior and junior public examinations, are also established. There were 78 of these schools in existence at the end of 1891, with an enrolment of 57,206 pupils.

State-aided schools.

In addition to the various classes of Public Schools already mentioned, there exist several institutions of an educational character which receive an annual subsidy from the Government. The most important of these is the Sydney Grammar School, which is one of the principal schools in the Colony. In 1891, the average quarterly enrolment was 404, and the daily attendance 381. Towards maintaining this school the Colonial Treasury contributed the sum of £2,842, the school fees and other revenue amounting to £5,762.

THE UNIVERSITY.

Sydney College.

In the year 1849 Mr. Wentworth presented a petition to the mixed Legislative Council from certain shareholders of a proprietary school, known as Sydney College, praying for the appointment of a select committee of the House "to consider the best means of carrying on the institution so as to afford the youth of the Colony the means of obtaining instruction in the higher branches of literature and science." The committee was appointed, but had, however, somewhat different instructions, and was directed to "consider and report how best to institute an university for the promotion of literature and science, to be endowed at the public expense." The committee, after a few weeks' deliberation, brought up its report, recommending the establishment of an university with a permanent endowment of £5,000 per annum out of the general revenue, and a Bill was brought in by Mr. Wentworth in accordance with the report. The Council was shortly afterwards prorogued, and the measure consequently lapsed for that session. In 1850 the bill, which was based mainly on the charter of University College, London, was reintroduced by Mr. Wentworth, and, after some discussion and a few amendments, was passed, receiving the Royal assent on 1st October of that year.

Constitution of the University.

The endowment was given for "defraying the stipends of teachers in literature, science, and art," and for administration purposes; there being no provision made for teaching any other branch. Power was, however, given to examine and to grant degrees after examination in law and medicine as well as in arts. The University was to be strictly undenominational, and the Act expressly prohibited any religious test for admission to studentship or to any office, or for participation in any of its advantages or privileges. Residence was not contemplated otherwise than in affiliated colleges, but authority was given to license tutors and masters of boarding-houses with whom students of the University might live.

Senate.

A Senate of sixteen Fellows was constituted by the original Act to govern the University, and they were empowered to elect from among themselves their own Provost and Vice-Provost, which titles were later on changed to those of Chancellor and Vice-Chancellor. The Fellows were, in the first instance, nominated by the Crown, but were to be replaced, as vacancies arose, by the Fellows themselves until there should be 100 graduates holding the degrees of Master in Arts, or Doctors in Law or Medicine. The first Senate commenced their labours at the close of the year 1850, with Mr. Edward Hamilton, M.A., as Provost, and Sir Charles Nicholson, M.D., as Vice-Provost. They shortly established three chairs in Classics, Mathematics, and Chemistry and Experimental Physics, and sent to England for competent professors to fill them; and on the 11th October, 1852, the University was opened with an imposing ceremony, in presence of the Governor and principal officers, and under the presidency of Sir Charles Nicholson, and twenty-four matriculated students were admitted to membership.

Charter.

In 1858 a royal charter was granted, which declares that "the degrees of this University in arts, law, and medicine shall be recognized as academical distinctions of merit, and be entitled to rank, precedence, and consideration in the United Kingdom as fully as if the said degrees had been granted in any university of the United Kingdom."

Amendments of the Act.

Since the passing of the original Act various changes have been made by amending Acts, of which the principal are as follows:—By an Act passed in 1857, those who had taken the degree of B.A. or M.A. received certain privileges in respect of admission to the Bar or to the Roll of Solicitors. In 1861 it was directed that in addition to the ordinary sixteen Fellows there should be not fewer than three nor more than six *ex officio* members of the Senate who should be Professors in such branches of learning as the Senate should by any by-law select; and such Professors and other Public Teachers and examiners and every superior officer declared to be such by the by-laws should be a member of the University, with the same rights and privileges as to the election of new Fellows as persons holding the degrees of M.A., LL.D., and M.D. In 1881 *Ad eundem* degrees, with equal privileges, were authorized to be conferred; and B.A.'s of three years standing were empowered to vote at new elections of Fellows. In 1884 the Senate's powers as regards teaching and degrees were extended by enabling it to give instruction and grant degrees or certificates in all branches of knowledge with the exception of Theology or Divinity, subject to a proviso that no student should be compelled to attend lectures or to pass examinations in Ethics, Metaphysics, or Modern History; and by the same Act it was directed, in accordance with a previous by-law of the Senate, that the benefits and advantages of the University should extend in all respects to women equally with men.

Convocation.

The number of persons entitled to vote at the elections of new Fellows reached 100 in 1872, whereupon the Senate passed by-laws in respect of such elections, and styled the electoral body "Convocation." This body, including the additions made by the several amending Acts, and comprising heads of affiliated colleges, who had been declared to be superior officers of the University under the Act of 1861, now numbers nearly 500.

Endowment of the University.

The public endowment of the University stood at £5,000 a year until 1880, when £1,000 was added for assistant lectureships, but in 1877 a bequest of the value of £6,000, and producing about £300 a year, was made by Mrs. Hovell, widow of the explorer of that name, for instruction in Geology and Physical Geography, which, together with fees, enabled the Senate to divide the Chair of Chemistry and Experimental Physics into two, to the first of which Geology and Physical Geography were attached. In 1882 a further vote of £5,000 was made to enable the Senate to establish Schools of Medicine and Engineering, and to give some further help to the original Department of Arts. Medical and Engineering Professors and Lecturers, and a Professor of Natural History, and some small lectureships in Arts were created; but this sum was soon found inadequate for the intended purposes, and has been increased to £7,900, inclusive of the £1,000 granted in 1880. Allowances have also been made for apparatus, and a sum of £2,000 per annum has been granted for Evening Classes in Arts. Principally out of this endowment a system of Extension Lectures to non-matriculants was commenced in 1882, first in the metropolis, but spreading to places at a distance; and it is not improbable that as time goes on and means increase these lectures may become a very prominent feature in the action and influence of the University.

Medicine and engineering.

In 1855 the present site was granted by Governor Sir Charles Fitzroy, by Royal authority, for the erection of suitable buildings, and also to provide land for the prospective erection of four denominational Colleges. Before this grant was made the work of the University had been carried on in the old Sydney College, which, together with its library and even an endowment for a Scholarship bequeathed by Mr. Solomon Levy, was purchased by the Government for the University, and a grant of £50,000 had been made by Parliament in 1853 as a building fund. The present site, granted in 1855, comprises about 126 acres, formerly known as Grose Farm, to which a further grant of 9 acres was afterwards added for the enlargement of the domain or park. As early as 1854 an Act was passed to aid and partly endow four colleges within the University. Contributions of not less than £10,000, and not more than £20,000, were to be made from the general revenue for building funds, provided that an equal sum were subscribed by private individuals, and £500 a year was to be paid annually by the Government towards the stipends of Principals for each College. Just before this, steps had been taken to establish a Church of England College, St. Paul's;

Grose Farm granted to the University.

Affiliated Colleges.

and St. John's Roman Catholic College followed in 1857, and the Presbyterian College of St. Andrew's in 1867. The Wesleyan body, for whom an equal area had been set apart, declined to accept it, and in 1873 some 12 acres of the land originally intended for a site for their college, was resumed by the Crown and dedicated to the Prince Alfred Hospital; and provision was made for the establishment by the University of a Medical School in connection with it and for the joint control of the University Senate and Hospital Board in respect of all appointments of the medical and surgical officers of the Hospital. But while the regulations under which students have access to the Hospital are framed by the Hospital Board, with the Senate alone rests the appointment of Professors and Lecturers in the Medical School.

Public Examinations.

The system of Public Examinations, similar in general character and purpose to the middle class examinations of Oxford and Cambridge, was instituted in 1867, and has gradually spread, till last year there were no less than sixty-six local centres other than Sydney, seven of which were in the Colony of Queensland; and at the examination held in September of that year there were 1,872 candidates. Of these, 143 presented themselves for the senior, and 1,729 for the junior, examination. 110 senior and 1,191 junior candidates passed successfully. The University also initiated examinations of articled clerks in 1877, in compliance with a rule of the Supreme Court, and during 1891 there were 37 successful candidates. An examination of candidates for appointment in the Civil Service was instituted at an earlier date; 283 candidates presented themselves at this examination during 1891, and 104 were successful.

Benefactions.

Many donations have been made to the University for the use and reward of students. Among the first was a gift of £1,000 each from Mr. Thomas Barker and from Sir Edward Deas-Thomson, represented by lands which are now of twice that value. Many others followed, and about £42,000 has been presented up to the present date, exclusive of prizes, which have been exhausted by award, and irrespective of increases in value. About £10,000 of this is still in suspense on account of intervening life estates to the widows of testators. Besides the above, a sum of £30,000 was left by the late Mr. Thomas Fisher for a library, and £6,000 has been given by the Hon. Sir William Macleay for a Curatorship of the Natural History Museum, presented by him to the University, and for which the Government have erected a suitable building. There have also been bequests of property other than money to the estimated value of £51,000 up to the present time.

Challis bequest.

Above all, the late Mr. John Henry Challis left his residuary estate to the University, subject to certain annuities. In December, 1890, the trustees handed over to the University the major part of the Australian portion of the estate consisting of £199,362 in investments, and £3,228 cash balance. Under this bequest the Senate have created new Chairs in Law, Modern Literature, History, Logic and Mental Philosophy, Anatomy, Engineering, and Biology, to which they have given the testator's name. The Hovell and Challis bequests constitute the only resources of the University for actual education other than the public endowments.

Teaching staff.

The teaching-staff, now that all the Challis Chairs are filled, consists of fourteen Professors, twenty-six Lecturers, of whom three are Evening Lecturers, and four Demonstrators. The subjects over which Professors preside are Greek, Latin, Mathematics, Chemistry, Physics, Geology and Physical Geography, Physiology, Anatomy, Engineering, Modern Literature, Logic and Mental Philosophy, Biology, Law, and History. The Lecturers deal with Geology and Physical Geography, Classics, Modern Literature, Mathematics, Architecture, Surveying, Principles and Practice of Medicine, Principles and Practice of Surgery, Midwifery and Diseases of Women, Materia Medica and Therapeutics, Pathology, Medical Jurisprudence and Public Health, Clinical Medicine, Clinical Surgery, Psychological Medicine, Ophthalmic Medicine and Surgery, Law of Real Property and Equity, Law of Procedure including Evidence, Law of Wrongs, Civil and Criminal, and Law of Obligations. There are also Tutors in Medicine and Surgery, and a Tutor to the female students. The Demonstrators are appointed in Chemistry, Physiology, Anatomy, and Physics.

Degrees conferred by the University.

Since its foundation the University of Sydney has conferred 916 degrees of various kinds, the highest number bestowed in any one year being 70, in 1890. Among the present members of the University there are 214 who hold the degree of M.A., 351 B.A., 18 LL.D., 15 B.L., 29 M.D., 47 M.B., 38 Masters of Surgery, 10 B. Sc., 1 Master of Engineering, and 17 Bachelors of Engineering. The number of students attending lectures increased from 61 in 1877 to 532 matriculated and 298 non-matriculated students in 1891, whilst the number of candidates who attended the public examinations has increased both in the senior and junior divisions, the former having advanced from 63 in 1877 to 143 in 1891, and the latter from 303 to 1,729.

Result of examinations.

Corresponding increases in the number of successful candidates at the public examinations have also taken place, as the following table will show:—

Year.	Number of students.		Number of students qualified by matriculation	Public Examinations.			
				Number of Seniors.		Number of Juniors.	
	Attending Lectures.	Attending extension Lectures.		Examined.	Passed.	Examined.	Passed.
1876	58	...	34	53	40	356	212
1877	61	...	23	63	38	303	135
1878	62	...	24	58	41	364	243
1879	83	...	58	76	64	333	247
1880	76	...	64	66	54	381	209
1881	81	...	80	48	36	392	231
1882	97	...	101	57	43	398	240
1883	128	...	85	57	36	473	299
1884	203	...	142	65	48	563	379
1885	206	...	115	84	73	645	440
1886	203	137	122	107	83	858	548
1887	215	329	132	125	87	834	562
1888	250	403	130	141	110	834	538
1889	275	327	210	115	90	1,085	706
1890	409	447	301	129	101	1,172	798
1891	532	298	478	143	110	1,729	1,191

Revenue and Expenditure of University.

The expenditure of the University prior to 1890 was met out of the revenue accruing from students' fees, the Government aid, and sundry private sources, irrespectively of income for the express use or reward of students. The following table will show the yearly state of the finances of the University during the period from 1876 to 1891 :—

Year.	Receipts.					Expenditure.
	Government aid.		Lecture fees.	Other sources.	Total.	
	Endowment.	Grants for apparatus or other special purposes.				
	£	£	£	£	£	£
1876	5,000	....	403	100	5,503	5,877
1877	5,000	....	334	100	5,434	5,434
1878	5,000	1,168	324	100	6,592	7,748
1879	5,000	114	476	100	5,690	5,746
1880	5,000	1,500	457	100	7,057	6,795
1881	5,000	1,000	706	100	6,806	6,227
1882	10,000	2,964	1,080	100	14,144	10,614
1883	12,000	2,343	1,266	120	15,729	15,381
1884	12,000	3,500	2,207	170	17,877	16,198
1885	12,000	4,500	2,479	385	19,364	20,094
1886	12,000	5,500	2,600	323	20,423	20,765
1887	12,000	4,918	2,819	308	20,045	20,811
1888	12,000	7,099	3,022	385	22,506	21,867
1889	12,000	6,800	5,667	807	25,274	28,030
1890	13,900	4,734	5,365	293	24,312	26,075
1891	13,900	4,400	7,262	11,694	37,256	36,649

School of Medicine.

An extensive addition to the University's magnificent buildings has been made for the use of the School of Medicine. It provides the most complete accommodation for students desiring to follow the profession of medicine and surgery, and the Prince Alfred Hospital, erected, as before stated, on the University grant, affords them the necessary means of study. At the commencement of the year

1891 there were 94 undergraduates, of whom 7 were ladies, in the Medical School, a very fair number considering that this school was not established until 1883, and then commenced with only four students. A laboratory for the Department of Physics has also been recently erected, and is replete with every means of illustrating the teaching of physical science, and an equally complete laboratory and halls are in course of construction for the Department of Chemistry and its adjuncts. The prospects of the University of Sydney are excellent, and it cannot fail to prosper, and exert a most beneficial influence on the future of Australia. An Act for founding an Affiliated College for Women has been passed, limiting the building endowment, however, to £5,000, but granting £500 a year for a Principal. It will be brought into operation as soon as the necessary funds are collected. The Department of Public Instruction also contemplates the erection of a College for the training of male teachers. The Senate of the University have granted the necessary site, and the Government have submitted plans of a building, to accommodate 51 students, and to cost £37,500, to the Parliamentary Standing Committee on Public Works.

University laboratory.

DENOMINATIONAL HIGH SCHOOLS AND COLLEGES.

Denominational Colleges.

All the principal religious bodies provide high schools and colleges where students may be educated according to the precepts of their various beliefs and prepared to compete for University honors, or the various professions which they may adopt. Evidence of the progress of superior denominational education in the Colony may be seen in the magnificent college buildings which surround the city, among which may be cited Newington College, the colleges of the Marist Brothers, and the Jesuit Fathers, at Hunter's Hill and Riverview, the old-established King's School at Parramatta, the North Sydney Church of England Grammar School, the Presbyterian Ladies' College at Croydon, and a host of other first-class establishments erected under the patronage of the various religious bodies.

TECHNICAL EDUCATION.

Necessity for technical knowledge.

Public attention was so strongly directed in the years which followed the great world exhibition of 1851, to the necessity of providing the artizan classes, and the people generally, with the means of obtaining a scientific knowledge of the various handicrafts, that technical schools sprang up in various parts of England, some being under the direct patronage of the State, while others were founded by the wealthy trade societies, or guilds, of the great English cities. The excellent results following the establishment of these schools could not fail to attract attention in the colonies, where a sound and practical knowledge of the manual arts is of paramount necessity. The foundation of the New South Wales Technical School was due in great measure to the efforts of a few gentlemen connected with the Sydney Mechanics' School of Arts, and as far back as 1873 it was decided to establish a Technical College affiliated to that institution, with the object of improving the scientific knowledge of Australian artizans. In the year 1878, a sum of £2,000 was granted by Parliament towards the organization of a Technical College, and for five years the work of the institution was carried on in connection with the School of Arts. In 1883, however, a board was appointed by the Government to take over its management, and the Technical College became henceforth a State institution. Towards the end of 1889 the Board was dissolved, and the Technical College came under the direct control of the Minister of Public Instruction.

Foundation of Technical College.

Curriculum.

The course of instruction, under the present constitution of the Technical College, comprises classes in agriculture, art, architecture, chemistry, commercial economy, geology and mineralogy, mathematics, mechanical engineering, pharmacy, physics, domestic economy, and sanitary engineering, and these classes are subdivided into sub-classes as may be warranted by circumstances.

Number of classes and students.

The college is open to both male and female students, and in 1891 there were 295 classes in operation, of which 73 were in

Sydney, 188 in various country towns, and 34 in connection with public schools. The teachers numbered 144, of whom 63 were in Sydney, 68 in the country, and 13 in charge of classes held at public schools. The individual enrolments per term amounted to 8,466 in all, 2,912 of whom were in Sydney, and 4,178 in the country, while 1,376 represented the enrolments of scholars at public schools. The total average attendance was 4,642, the Sydney average being 1,486, that for the country 2,504, while the average attendance at public schools was 652. At the annual examinations 2,178 students presented themselves, of whom 1,493 passed—an average of 68·5 per cent.

Technical workshops.

Technical workshops have been fitted up in Sydney, where mechanical classes are held, and the teaching is illustrated by all the various tools and apparatus needed for the proper understanding of the different processes of each separate class of work. The Technical College is now fairly established, and its benefits are already being felt and appreciated, whilst the future has every promise of still greater usefulness. A site for the College has been secured by the Government at Ultimo, on which a building suitable for its requirements has been erected.

Cost of technical education.

In 1891 the expenditure of the Board of Technical Education amounted to £37,601. In addition to this, the sum of £3,721 was contributed by the students in the shape of fees. The Parliamentary vote for the year was £33,880. The means at the disposal of the board have not been sufficient for the establishment of country branches in every case where application has been made, but lecturers have been appointed to visit from time to time the principal country centres, and deliver lectures in mineralogy, geology, and agriculture.

REFORMATORIES.

Industrial Schools.

In addition to the purely educational establishments, the State maintains three reformatories or disciplinary institutions, two for girls—the Industrial School at Parramatta, and the Shaftesbury Reformatory, near South Head—and one for boys—the nautical school-ship "Vernon," since transferred to the "Sobraon." At the Parramatta institution the total enrolment of girls during the year was 117, and the new admissions, up to the 31st December last were 44, of whom 16 were under and 28 over 14 years of age. The cost of maintaining the school in 1891 was £2,752. The Shaftesbury Reformatory, under the Minister of Justice has been in existence over eleven years, and is designed for the reception of young women under sentence, a wise provision, for by this means are avoided the alternatives of sending the offenders to the institution at Parramatta (late at Biloela), where their influence and example might have a baneful effect on more youthful minds, or of consigning them to gaol. The want of a similar institution for criminal youths is much felt. It would indeed prove a boon in many cases, not only to the individuals themselves but to society at large, and might often be the turning point in a career just started on a downward course. The number of inmates at Shaftesbury at the close of 1891 was 41, and the expenditure during the year amounted to £941 11s. On board the "Vernon" 361 boys were dealt with during the year, and the number remaining at the termination of 1891 was 230. Up to the end of 1891, there had been 2,656 boys admitted on board, of whom 2,395 had left. During 1891, 20 of the latter had been under conviction, or a percentage of 0·8 for the year, as against a percentage of 1·8, which is the proportion of convictions if the whole male population over 15 years of age be taken. Favorable reports were received respecting more than 92 per cent. of the apprentices from the "Vernon," who remained still under its supervision, and were liable to be brought back in case of misconduct. The management of the training-ship is excellent, and its cost to the State during 1891 was £7,195. The results obtained in the three above-mentioned establishments have hitherto been of a very successful character, many children having been reclaimed from a depraved life, or rescued from unhappy surroundings, and turned out, after a course of some years' training, useful members of society.

The "Vernon" Training Ship.

SCIENTIFIC SOCIETIES.

Royal Society.

In a young country such as New South Wales, where most of the people are engaged in the development of its material resources, the existence of a leisured class, or one devoted to the pursuit of science, is hardly to be looked for. Nevertheless it is satisfactory to find that the higher aims of science are far from being neglected. As far back as the year 1821, a scientific society under the title of the Philosophical Society of Australasia was founded in Sydney, which, after experiencing many vicissitudes of fortune, was transformed in 1866 into, and afterwards incorporated under the title of, the Royal Society of New South Wales. The society is now in a flourishing condition, counting amongst its members some of the most eminent men in the Colony. Its object is to forward the advancement of science in Australia, and favour original research in all subjects of scientific, artistic, and philosophical interest, which may further the development of the resources of Australia, draw attention to its productions, or illustrate its natural history. The proceedings, published every year, include papers of the greatest interest on important scientific questions, especially those whose solution is of Australian interest.

Linnæan Society.

The study of the botany and natural history of Australia has attracted many enthusiastic students, and the Linnæan Society of New South Wales was also established for the special purpose of furthering the advancement of these particular sciences. The society is housed in a commodious building at Elizabeth Bay, one of the most beautiful spots near the city, and already possesses a library and museum. The society has been liberally endowed by the late Hon. Sir William Macleay, who, not content with being one of its most munificent supporters, was also an indefatigable worker in the field of science. The society's proceedings are published at regular intervals, and contain many valuable papers, together with excellent illustrations of objects of natural history.

Aid received by scientific societies.

The scientific societies just mentioned depend for support mainly on private contributions, though the Government has hitherto allowed their "Proceedings and Transactions" to be printed free of charge at the Government Printing Office.

Sydney Observatory.

Among the other institutions of a scientific and educational character which the Colony so liberally supports the Sydney Observatory is not the least important. Situated in a commanding position, it is admirably fitted for the purpose it is intended to serve. The present building was erected in 1856 at the instance of Sir William Denison, then Governor of the Colony, who took a great interest in scientific pursuits. The Government Astronomer has under him a complete staff of assistants, and during the year 1891 a sum of £4,983 was expended in connection with the institution. Meteorological observations have received special attention, as befits so important a subject in a country whose prosperity depends so much upon climate. When the present Astronomer took office in 1870, there were in the Colony only six stations, and observations on the climate, rainfall, and other meteorological phenomena were necessarily very limited in character. At the end of 1891 the number of stations had been increased to 1,088. Rain gauges have also been established at most of the sheep and cattle stations of the interior, with a result which is highly satisfactory. The light thrown on the true characteristics of the climate, especially of that part of the Colony remote from the sea coast, has tended to modify the notion long current as to its unfitness for agricultural as well as pastoral settlement.

Australian Museum.

The Australian Museum, which is the oldest institution of the kind in Australia, occupies a conspicuous site in the centre of Sydney, facing one of the principal parks. The collections contain carefully selected specimens of the principal objects of natural history found in kindred establishments, and also a most complete collection of zoological specimens of distinctly Australian character. The popularity of the institution is evinced by the increasing number of persons by whom it is visited. The Museum is open to the public every day except Monday. On Sundays the visitors are very numerous. The number of visitors during 1891 was 132,845, the daily average being 787 on Sundays, and 296 on week days. The expenses in connection with the institution amounted to £7,638, of which £1,080 was expended on account of purchase, collection, and carriage of specimens.

Free Public Library.

The Free Public Library was established on the 1st of October, 1869, when the building and books of the Australian Subscription Library were purchased by the Government. The books thus acquired formed the nucleus of the present library. The number of volumes originally purchased was about 16,000, and on the 31st December, 1891, they had increased to 91,945, including those in the lending branch, or lent to country libraries. The lending branch was established in 1877, to meet a growing public want, and, under the present system any person may, on the recommendation of a clergyman, magistrate, or other responsible person, obtain under certain simple regulations, the loan of any of the works on the shelves, free of charge. The scope of this institution was further extended by the introduction of a system by which country libraries and Mechanics' Institutes may obtain on loan works of a select kind, which in many instances would be too expensive for them to purchase on account of the slender funds at their disposal. Under this system, boxes are made up containing from 60 to 100 books, and forwarded to the country libraries on application, to be returned, or exchanged within four months. This system was initiated in August, 1883, and has been carried on successfully ever since. In the course of 1891, 133 boxes, containing 10,350 volumes, were forwarded to 78 institutions, some of them at considerable distances from the metropolis. The distance which these books were carried amounted to 45,670 miles, being on an average 343 miles for each box, an enormous distance, partly accounted for by the fact that some places to which books are sent were most readily accessible through other colonies. All the charges in connection with the despatch and return of books, insurance, &c., are defrayed by the State, and the system in

Loan of books to country libraries.

vogue in New South Wales is the most liberal of its kind in existence.

Reference Library.

The reference department of the Free Public Library contains 65,929 volumes, and the lending branch 21,506. The country libraries were, on the 31st December, 1891, in possession of 4,510 volumes, lent under the system above mentioned, the total number of books and pamphlets, the property of this institution, being 91,945, classified as under :—

Synopsis of Classification.	Reference Department	Lending Branch.	Country Libraries.	Total.
Natural Philosophy, Science and the Arts	7,827	3,318	836	11,981
History, Chronology, Antiquities, and Mythology	6,044	2,937	990	9,971
Biography and Correspondence	4,237	3,491	1,212	8,940
Geography, Topography, Voyages and Travels, &c.	6,057	3,152	808	10,017
Periodical and Serial Literature	17,616	......	......	17,616
Jurisprudence	3,669	875	88	4,632
Theology, Moral and Mental Philosophy, and Education	3,947	1,258	116	5,321
Poetry and drama	2,284	746	107	3,137
Miscellaneous Literature and Collected Works	4,920	*5,131	353	10,404
Works of Reference and Philology	4,402	......	......	4,402
Duplicates and unbound volumes	1,783	......	......	1,783
Pamphlets	3,143	......	......	3,143
Books for the Blind	.....	598	......	598
Total Number of Volumes	65,929	21,506	4,510	91,945

* Including 2,401 volumes of Fiction.

Popularity of Library.

The popularity of the Free Public Library is clearly proved by the number of persons availing themselves of the privileges which it affords. The increase has been very regular, as will be seen in the following statement showing the number of visitors to the library, rising from 59,786, in 1870, to 173,205, in 1891, 58,258 of whom were visitors at the lending branch. These figures show a considerable increase on those of the previous year, and are the highest yet recorded in the history of the institution.

Attendance of visitors.

1870	59,786
1871	60,165
1872	48,817
1873	76,659
1874 (eleven months)	57,962
1875	66,900
1876	72,724
1877 (Lending Branch first opened)	124,688*
1878	117,047
1879 (Exhibition open)	152,036
1880	134,462
1881	136,272
1882 (eleven months)	133,731
1883	155,431
1884 (eleven months)	161,877
1885	165,715
1886	168,685
1887	139,203*
1888	149,425
1889	132,983
1890	155,822
1891	173,205

* Reference Library closed for three months, for moving.

Number of readers.

Although the lending branch contains but 21,506 volumes, the total number used during the year was not less than 67,990, and the number of persons availing themselves of the privilege of borrowing was 5,002, so that on an average each book was taken a little over three times, and each person to whom a permit was granted used nearly fourteen volumes during the year. As usual, a large portion of the works read was from fiction, each of the 2,401 novels in the branch having been used nearly eight times during the year. The number of volumes of each class taken out was as follows :—

Synopsis of Classification.	No. of volumes used.
Natural Philosophy, Science, and Arts	6,859
History, Chronology, Antiquities, and Mythology	6,841
Biography and Correspondence	6,836
Geography, Travels, &c.	11,121
Jurisprudence	1,248
Mental and Moral Philosophy	2,245
Poetry and Drama	1,814
Miscellaneous Literature	12,444
Prose Fiction	18,582
Total	67,990

During 1886 and 1887 considerable extensions were made to the premises of the Free Public Library, which had become much too small for the accommodation of the public, and the proper housing of the books. It was at length decided to pull down the old building in Macquarie-street, and a contract was made about the middle of 1887 for rebuilding a large portion of the Library at a cost of £10,455. This work was progressing throughout the year 1889, and the new building was opened to the public in April, 1890. The Sydney Free Public Library is now one of the most convenient in Australia.

Cost of maintaining library.

The institution forms a separate department, under the control of the Minister of Public Instruction, and its cost to the State, during 1891, was, in addition to the amount for building:—

Salaries, &c.	£6,257
Buildings and Repairs	707
Books	2,907
Total	£9,871

Schools of Art and Municipal Libraries.

Besides the Free Public Library of Sydney there are smaller libraries established in the principal population centres throughout the Colony. These libraries may be broadly classed under two heads—Schools of Arts—receiving an annual subvention in proportion to the amount of monetary support accorded by the public; and Free Libraries established in connection with Municipalities. The former class are far the more numerous. Under the provisions of the Municipalities Act of 1867 any municipality may establish and maintain a Free Library, and, where such is done, the Council of the Municipality is entitled, for the purchase of books, the sum of £200 if the library is available for the use of a population of 1,000 or to £100 where the population to whom the library would be accessible reaches 300 persons. The number of volumes in the various public libraries, excluding the Free Public Library, is estimated at about 240,000.

National Art Gallery.

The National Art Gallery was first instituted in 1871 in connection with the New South Wales Academy of Art. It was reopened as the National Art Gallery in 1880, and is now situated in the Outer Domain, in a convenient and well-lighted building, which is at present unfinished as regards the exterior, although steps are contemplated to complete the design. It contains an an excellent collection of paintings and statuary, comprising some of the most famous works of the best modern artists of the old world, and includes several very valuable gifts from private persons. Like the other national institutions of New South Wales, the Gallery is open on Sundays as well as week-days, and on the former and on public holidays the attendance is especially numerous. During 1891 it was visited by 238,131 persons, the average Sunday attendance being 1,889 and on week days 450. Up to the end of 1891 the total expenditure on this institution was £83,657, of which the sum of £69,976 was expended on works of art. The disbursements for 1891 were :—

	£
For works of art	5,171
For maintenance	936
For salaries	962
Total cost to the State	£7,069

Technological Museum.

The Technological Museum is also situated in the Outer Domain, in the Agricultural Hall, where it was removed after the destruction of the Garden Palace by fire. It is intended to remove it to apartments in the building at Ultimo, which has been erected for the Technical College. This museum was instituted at the close of 1879 on the initiative of the Trustees of the Australian Museum; but the whole collection of some 9,000 specimens was totally lost in 1882 by the fire above-mentioned. Strenuous efforts were at once made to replace the lost collection, and in December, 1883, the museum was again opened to the public, and now contains interesting and valuable series of specimens illustrating the various stages of many manufactures, and an excellent collection of animal and vegetable products. The popularity of this institution may be gathered from the fact that 112,632 persons visited it during 1890, the Sunday average being 836, and the week day 221. There are local Technological Museums at Goulburn, Bathurst, West Maitland, and Newcastle, which were visited by 25,842 persons during the year. The sum of £5,186 was expended on the various institutions of this nature during 1891.

RELIGION.

Equality of all religions.

In the eyes of the State all religions are equal in New South Wales, but during the early days of the Colony such was not the case. New South Wales was originally essentially a Crown Colony, and the Church establishment, as it existed in England, was naturally transplanted to these shores. Ecclesiastical monopoly nevertheless only continued for a short time, and the countenance and support of the State were eventually extended, during the governorship of Sir Richard Bourke, to the principal religious bodies which then existed—the Anglicans, Roman Catholics, Presbyterians, and Wesleyan Methodists. To the clergy of each of these denominations the Government granted what has usually been denominated State aid, which continued long after the old political system had passed away and had been replaced by Responsible Government. In 1862, however, an Act was passed limiting future payments to the clergy then actually in receipt of State aid. In the year following the passing of this Act the claims on the Government amounted to £32,372, and were thus distributed :—

State aid to religion.

Church of England	£17,967
Roman Catholic Church	8,748
Presbyterians	2,873
Wesleyan Methodists	2,784

Year by year the sum payable has been lessening, owing chiefly to the deaths of clergymen in receipt of State aid, so that in 1891 the payment by the State was £9,568, distributed as follows :—

Church of England	£5,391
Roman Catholic Church	2,600
Presbyterians	702
Wesleyan Methodists	875

Payments on account of State aid.

The payments to the clergy of different denominations are given for various periods since 1863. It will be observed that in some years the amounts paid were less than in succeeding years. This anomaly is due to the temporary stoppage of the stipends of clergymen who were absent from the Colony :—

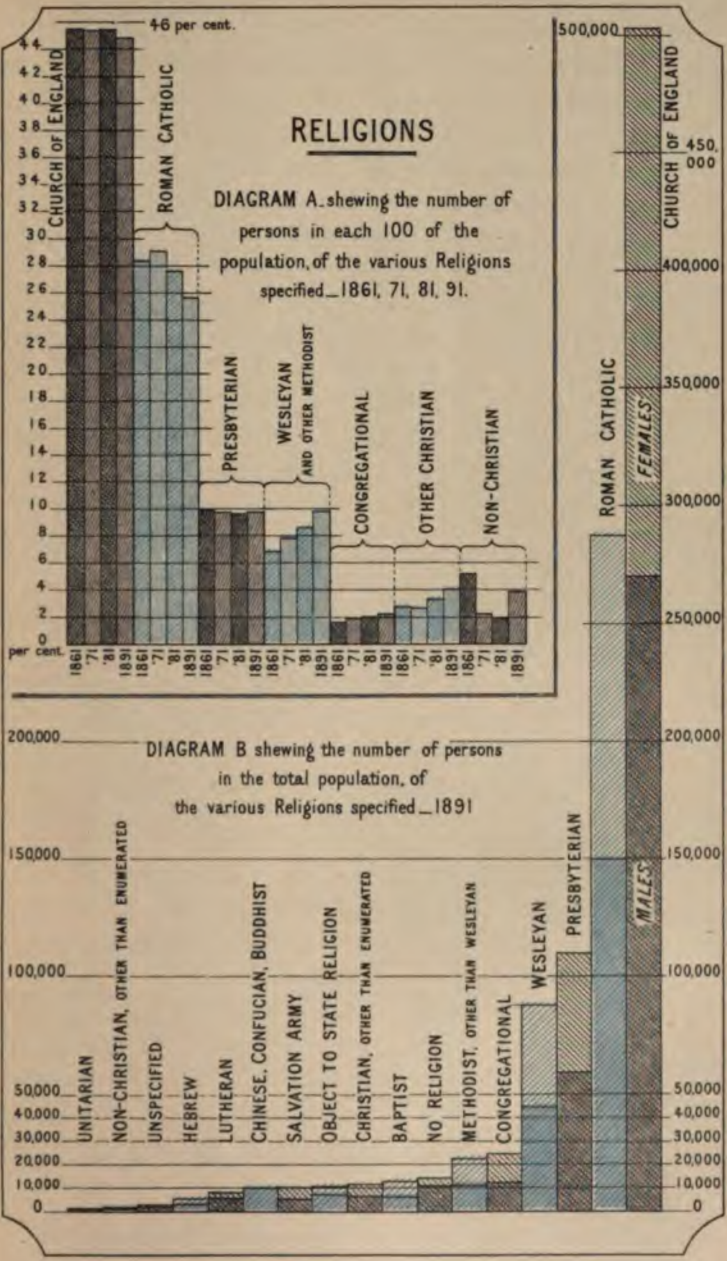
Year.	Church of England.	Roman Catholic Church.	Presbyterian.	Wesleyan Methodist.	Total—All denominations.
	£	£	£	£	£
1863	17,967	8,748	2,873	2,784	32,372
1864	17,519	8,234	2,614	1,179	29,546
1865	14,111	7,430	3,090	1,572	26,203
1870	12,386	6,583	2,180	1,573	22,722
1875	10,725	5,608	1,626	1,372	19,331
1880	7,739	3,892	1,702	1,716	15,049
1885	6,041	3,000	1,052	1,136	11,229
1890	5,591	2,600	702	900	9,793
1891	5,391	2,600	702	875	9,568

The number of persons entitled to State aid during 1891 was 57—31 Church of England, 15 Roman Catholics, 5 Presbyterians, and 6 Wesleyan Methodists.

Adherents of each religion.

At the census of 1891 the number of adherents to each of the denominations, with the clergy registered for the celebration of marriages, was as follows; the table also shows the average number of adherents to each denomination under the charge of each of the clergy :—

Denomination.	Clergy.	Adherents.	Proportion of adherents to clergy.
Church of England	333	502,983	1,510
Roman Catholic	295	286,917	972
Presbyterian	156	109,383	701
Wesleyan Methodist	133	87,489	657
Other Methodist	34	22,621	665
Congregational	65	24,112	371
Baptist	32	13,108	409
Lutheran	5	7,940	1,588
Salvation Army	10	10,312	1,031
Unitarian	1	1,328	1,328
Other Christians	23	12,072	524
Hebrews	3	5,484	1,828
Other Sects	......	40,205	.....
Total	1,090	1,123,954	1,031
Aborigines not tabulated	......	8,280	......
	1,090	1,132,234	1,039



RELIGIONS

DIAGRAM A. shewing the number of persons in each 100 of the population, of the various Religions specified. 1861, 71, 81, 91.

DIAGRAM B shewing the number of persons in the total population, of the various Religions specified. 1891

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PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE
SYDNEY, NEW SOUTH WALES.

LIBRARIES

Church attendance.

The number of persons attending Divine Service on Sundays averaged 346,638 for the year 1891. This number represents the attendance of adults only; if school children were included the number would be about 470,200. When the sparseness of the population in some parts of the country is considered the church attendance will appear very large, and though apparently less than found in the colony of Victoria, is proportionately much greater than in England. The number of adult attendants on Divine Service in 1890 was returned at 300,890; for 1885 it was 263,379, and for 1881 it was 213,044, so that there has been a gradual increase, fairly keeping pace with the population. The relative numbers of each denomination in attendance have remained very much the same for several years past. In 1881 the Church of England had the largest attendance, but from 1884 the Church of Rome has taken the lead.

The figures showing the attendance at Divine Service on Sundays for each of the principal denominations are given hereunder. Sunday school children are not included. The authorities of the Salvation Army return the number of attendants at their services as 36,215, whereas the Census returns show 10,312 only as the number of soldiers enrolled. It would appear therefore that a great proportion of those who attended the Army services are nominally members of other denominations :—

Denomination.	Number of distinct persons attending Divine Service.	Proportion of Denominations attending Divine Service.
		Per cent.
Church of England	85,870	17·1
Roman Catholic	109,374	38·1
Presbyterian	35,531	32·5
Wesleyan Methodist	46,264	52·9
Other Methodists	10,095	44·6
Congregationalist	12,345	51·2
Baptist	6,460	49·3
Salvation Army	10,312	100·0
Other denominations	4,484	7·6
Total	320,735	28·3

Church of England.

The Church of England is the largest religious denomination in the Colony, whether judged by the number of professed adherents, the number of clergy, or the number of buildings used for divine service. During the year 1891 there were 626 churches belonging to this denomination and 123 school-houses and 955 public buildings and dwellings used for public worship, accommodating 129,001 persons; the attendance of distinct persons counting only adults was 85,870. The number of clergy registered under Acts 19 Vic. Nos. 30 and 34, for the celebration of marriages, was 333. The Church of England in the colony is governed by a metropolitan who is also primate of Australia and Tasmania, and five other Bishops whose sees are Bathurst, Goulburn, Newcastle, Grafton and Armidale, and Riverina.

Roman Catholic Church.

The Roman Catholic Church is presided over by the Cardinal Archbishop of Sydney, assisted by a Coadjutor Bishop under whom are the suffragan bishops of Bathurst, Goulburn, Grafton, Maitland, Armidale, and Wilcannia, the whole colony forming an ecclesiastical province. There are 295 priests licensed to celebrate marriages. The number of Roman Catholic Churches properly so called was 431; besides these there were 50 school-houses and 847 public buildings or dwellings used for Divine Service. The accommodation afforded by the churches amounted to about 113,255 sittings and the attendance on Sundays averaged 109,374.

Presbyterian Church.

The various branches of the Presbyterian Church in the colony have 285 churches and 63 schools used for public worship; there were also 515 public buildings or dwellings occasionally used for the same purpose in 1890. The number of ministers was 156, of whom 146 were connected with the Presbyterian Church of New South Wales, 6 with the Presbyterian Church, Synod of Eastern Australia, 3 with the Presbyterian Church of Eastern Australia, and 1 with the Presbyterian Church of Eastern Australia unattached. The accommodation provided in churches was 56,190 sittings, and the attendance numbered about 35,531, not including Sunday-school children.

The Wesleyan Methodist communion is divided into eight districts. Throughout the colony there are 392 churches and 448 other preaching places with sittings, in the former to the number of 61,920, and in the latter 22,568, in all 84,488. The denomination owns also 64 school buildings and 82 parsonages, and has in its service 134 regular clergy and 471 local preachers. The number of church members is said to be 8,655, of whom 1,019 are communicants, and the attendance of adherents at Divine Service is not less than 46,264, not including children. **Wesleyan Methodists.**

The Primitive Methodists, United Methodists, and other Methodists have 93 churches, and 33 other buildings, and 34 clergy; the accommodation provided will seat 17,415 persons, the attendance at Divine Service is about 10,095. **Other Methodists.**

The Congregational Church has 64 churches as well as 63 public buildings or dwellings used for worship; the sittings provided will accommodate 21,481 persons. The clergy licensed to celebrate marriages number 65 and the attendance at Divine Service on Sundays averages about 12,345. **Congregationalists.**

The various Baptist Churches in the colony have 32 licensed ministers with 38 churches and 53 school-houses or other buildings devoted to public worship; the Sunday attendance averages 6,460 persons, but there is sitting accommodation for 10,566. **Baptists.**

The Salvation Army has only 10 officers licensed to celebrate marriages, but has 194 buildings used for service, accommodating 40,005 persons. The number of persons attending Sunday service is stated by the authorities to be 36,215. **Salvation Army.**

Besides those above enumerated there are other distinct religious bodies, for the most part Protestant denominations, with clergy licensed by the State to celebrate marriages. The number of clergy ministering to these was 32; the churches, school-houses, and public buildings used for Divine Service numbered 132 and the attendance on Sundays was about 4,484 persons. **Other Denominations.**

The number of registered ministers belonging to all faiths was 1,090, and the churches numbered 2,064, in addition to which there were 370 school-houses and 2,997 dwellings or public buildings used for public worship. The accommodation provided would seat about 481,891 persons. The average attendance was 320,735.

Sunday-schools.

Nearly all the religious bodies maintain Sunday-schools. The attendance of children at these schools shows a considerable increase during the past few years. Some part of this increase is merely apparent, and is due to the greater completeness in the returns, but no small portion of the improved attendance results from the extension of school accommodation in various parts of the country. The attendance of children at the Sunday-schools of the leading denominations, with the number of schools and teachers during 1891, was :—

Sunday-schools maintained by all denominations.

Denomination.	No. of schools.	Number of teachers.			Average number of scholars.		
		Male.	Female.	Total.	Male.	Female.	Total.
Church of England...	551	1,136	2,548	3,684	17,101	21,254	38,355
Roman Catholic	429	327	1,087	1,414	11,050	14,627	25,677
Presbyterian	231	566	987	1,553	5,722	6,906	12,628
Wesleyan Methodist	341	910	2,053	2,963	10,495	13,195	23,690
Other Methodists.....	88	507	492	999	3,742	4,325	8,067
Congregational	72	380	431	811	3,394	4,030	7,424
Baptist	43	168	170	338	1,206	1,466	2,672
Salvation Army	102	89	161	250	1,488	2,042	3,530
Other denominations	30	90	67	157	734	747	1,481
Total	1,887	4,173	7,996	12,169	54,932	68,592	123,524

The attendance given above is extremely high, amounting as it does to 54 per cent. of the total children between the ages of 7 and 15 years, both inclusive, at which ages children generally attend Sunday-schools. The number of Sunday-schools and teachers, and the attendance during each of the past ten years were :—

Attendance at Sunday-schools.

Year.	Number of schools.	Number of teachers.	Average attendance.		
			Male.	Female.	Total.
1882	1,318	9,190	34,393	41,334	75,727
1883	1,441	9,793	35,205	42,610	77,815
1884	1,461	9,426	35,883	43,202	79,085
1885	1,513	9,986	37,991	46,531	84,522
1886	1,596	10,759	47,307	56,354	103,661
1887	1,614	10,749	48,333	58,999	107,332
1888	1,724	11,267	50,556	61,735	112,291
1889	1,832	11,568	52,778	63,896	116,674
1890	1,840	12,019	54,520	67,365	121,885
1891	1,887	12,169	54,932	68,592	123,524

PART XVIII.

Social Condition and Charities.

IT may safely be said that the material prosperity of New South Wales compares favourably with that of any other country, however fortunate may be its lot. But in one particular this Colony, in common with all the provinces of Australasia, differs greatly from other countries, especially those of the Old World. Wealth is widely distributed, and the contrast between rich and poor, which seems so peculiar a phase of old-world civilizations, finds no parallel in these southern lands. That there is poverty in the colonies is undeniable, but no one in Australasia is born to poverty, and that hereditary pauper class, which forms so grave a menace to the freedom of many States, has, therefore, no existence here.

Propertied classes.

It is estimated that in the United Kingdom six persons in every hundred possess property to the amount of £100; whereas in the colonies the proportion is not less than 12·3 per cent. This bare statement shows the vast difference in the conditions of life in Australasia and in the richest country of Europe. No poor rate is levied in the colonies, nor is such needed; for although it may happen that from time to time the assistance of the State is claimed by, and granted to, able-bodied men who are unable to find employment, that assistance takes the form of wages paid for work specially provided by the State to meet a condition of the labour market which is certainly abnormal.

State assistance to charities.

The chief efforts of the authorities, as regards charity, are directed towards the rescue of the young from criminal companionship and temptation to crime, the support of the aged and infirm, the care of the imbecile or insane, and the subsidising of private charity for the cure of the sick and injured, and the amelioration of want.

Supervision of expenditure.

Even where the Government grants aid for philanthropic purposes, the management of the institutions supervising the expenditure is in private hands; and in addition to State-aided institutions there are numerous private charities, whose efforts for the relief of those whom penury, sickness, or misfortune has afflicted are beyond all praise.

Rescue of the young.

The rescue of the young from crime is attempted in two ways—first, by means of Orphanages, Industrial Schools, and Reformatories, which take care of children who have been abandoned by their natural guardians, or who are likely, from the poverty or incapacity of their parents, to be so neglected as to render them liable to lapse into crime; and, secondly, by sequestering children who have already committed crime, or whose parents or guardians find themselves unable to control them.

Necessity for hospitals.

In the part of this volume dealing with mortality it is pointed out that the number of deaths caused by accident is very great. This arises from the peculiar nature of the occupations in which a large proportion of the adult male population is employed. Though New South Wales has long been settled, its resources are by no means developed, and very many men are at work far away from the home comforts of everyday life, and from home attendance in case of sickness or injury. Hospitals are therefore absolutely essential under the conditions of life in the country districts of the Colony, and they are accordingly found in every important country town. At the close of the year 1891 there were in operation in the Colony 92 hospitals or infirmaries, 84 of which were assisted by the State.

Accommodation in hospitals.

In these hospitals accommodation was provided in 403 wards or dormitories, having a total capacity of 3,147,204 cubic feet, so that the average air space to each dormitory was 7,808 cubic feet. There were 2287, beds, and the average air space to each patient was a minimum of 1,376 cubic feet; but as the hospitals are rarely filled to the limit of their accommodation, the air space to each patient was as a rule greater than the minimum just stated.

Persons under treatment.

During the year 19,096 persons were under treatment as indoor patients. Of this number 1,261 remained from the previous year, and 17,835 were admitted during 1891. There were discharged 15,643 persons, either as cured or relieved, or at their own request, and 540 as past all human assistance, while 1,577 died. The number remaining in hospital at the close of the year was therefore 1,336. The following statement shows the number of admissions, discharges, and deaths for the past ten years:—

Year.	Total Patients under Treatment.	Number Discharged as Cured, &c.	Deaths.		Number of Patients at the close of Year.
			Number.	Per cent. under treatment.	
1882	8,445	6,855	894	10·6	696
1883	8,245	6,659	796	9·7	790
1884	9,318	7,375	952	10·2	991
1885	12,793	10,449	1,329	10·4	1,015
1886	13,115	10,825	1,249	9·5	1,041
1887	13,438	11,140	1,190	8·9	1,108
1888	15,176	12,569	1,424	9·4	1,233
1889	16,865	13,535	1,477	8·8	1,311
1890	17,041	14,195	1,361	8·0	1,294
1891	19,096	15,643	1,577	8·3	1,336

Average number of hospital cases.

The number remaining at the close of the year may be taken as representing the average number resident. It will be seen from the preceding table that the increase has been fairly regular, so that the proportion of the population to be found in hospitals is about the same in each year, and averaged 1·2 per thousand in 1891. The length of time during which patients remain under treatment has not been exactly determined; but as far as the information extends it would appear the average is about 26 days for all hospitals. In the Sydney Hospital the average stay of patients during the year 1891 was 24·7 days. It is interesting to note that patients received under orders from the Government, remained in hospital on the average longer than those paying for or contributing towards their own support.

Death rates in hospitals.

The death rate per 100 persons under treatment during the past ten years was 9·2, while the rate for 1891 was 8·3 or 0·9 below the decennial average. The rate for each year will be found in the preceding table. The death rate of hospitals in New South Wales, compared with Europe, is undoubtedly very high. The number of fatal cases is swollen by the inclusion of the deaths of persons already moribund when admitted, and of persons in the last stage of phthisis. It has elsewhere been pointed out that deaths from accidents form a very considerable proportion of the total deaths registered, a circumstance due to the nature of the occupations of the people, and the dangers incidental to pioneering enterprise. A large majority of the accidents that occur, when not immediately fatal, are treated in the hospitals; and, indeed, these institutions, especially in country districts, are for the most part maintained for the treatment of surgical cases. When these circumstances are taken into consideration the cause of the apparent excess of deaths in the hospitals of the Colony will be at once understood.

State expenditure for pauper patients.

The amount expended by the State for the maintenance of sick paupers in the year 1891 was £10,674 2s., which was distributed thus:—Sydney Hospital (including Moorcliff) for the maintenance of pauper patients, £6,170 7s. 6d.; Prince Alfred Hospital, ditto, £4,046 2s. 6d.; and the Carrington Convalescent Hospital, £457 12s. During the year there were 6,546 applications for admission into the metropolitan hospitals, of which number 3,586 were granted; the other cases received recommendations for admission to the Asylums for the Infirm and Destitute, orders for out-door hospital treatment, or were refused as unfit subjects for State relief; 586 persons were admitted into these hospitals as urgent cases, the remainder were admitted on recommendations from the hospital admission depôt. During the past three years the Sydney Hospital, including the Moorcliff branch for ophthalmic cases, has received from the Government, for the maintenance of sick paupers, £18,145, or an average of £6,048 a year, and the Prince Alfred Hospital, £10,954, or an average of £3,651 a year. The Carrington Hospital for convalescents received £458 during 1891 for maintenance of sick paupers. As this appears for the first time in that year, it has not been included in making

Cost to the State.

up the following averages. These sums are in addition to the £4,000 a year given as a conditional endowment to each of these hospitals, and £600 a year which the Government pays as the rent of Moorcliff. The total sum paid by the Government to the Sydney and Prince Alfred Hospitals during the last three years, exclusive of subsidies for special purposes, was £53,700, or an average of £17,900 a year. The expenses of the Coast Hospital, which are borne entirely by the Government, averaged £12,080 annually for the same period, so that nearly £30,000 a year is spent by the Government in medical relief in the metropolis, in addition to grants to suburban and country hospitals, payments for attendance of aborigines, expenses attending special outbreaks of disease in country districts, which are met from the general medical vote, and the maintenance in the asylums for the Infirm and Destitute of a large number of chronic and incurable hospital cases.

Destitution in Colony less than appears.

The mere mention of so liberal an expenditure by the Government for the relief of the sick might, without explanation, lead to a misapprehension with regard to the amount of destitution in the community. It should therefore be understood that out of the 5,141 persons to whom orders for admission to the Metropolitan Hospitals, the Carrington Centennial Hospital, and the Asylums for the Infirm and Destitute during the year 1891 were granted, only 1,137 were natives of New South Wales, while 296 came from the other Australasian Colonies. The natives of Great Britain and Ireland, however, numbered no less than 3,192, in addition to whom there were 516 foreigners, including Chinese, Indians, and other Asiatics. The total number relieved, excluding the natives of New South Wales, was 4,004, of whom 437 had been less than twelve months in the Colony, 308 less than six months, and 106 less than one month. The Medical Adviser to the Government states that it is not an infrequent occurrence to find patients who apply for hospital relief admit that they have arrived direct from a neighbouring colony and that they have come solely for the purpose of obtaining this relief. Many arrive in the last stage of phthisis, or in a condition of chronic ill-health, and he recommends the adoption of some legislation, such as exists in the other Colonies, to prevent the influx of persons likely to become a charge upon the State.

Outdoor relief.

No exact information is to hand respecting the outdoor relief afforded by hospitals, this form of charity not being so important as indoor relief; nevertheless, the number of attendances during 1891 was 29,978, and estimating four attendances to each person, there were relieved 7,494 persons.

Expenditure on hospitals.

Omitting from consideration the Government establishment at Little Bay, the expenditure in 1891 of all the hospitals of the Colony for purposes other than building, repairs, and out-door relief, was £101,923, representing an average of £87 2s. 3d. per bed occupied. This sum is somewhat in excess of the truth, as full deduction cannot be made for out-patients. The average cost for each indoor patient treated was £5 18s. 6d. The subscriptions received from private persons amounted to £36,217, and the miscellaneous receipts, including payments by patients, were £33,528, in all £69,745 from private sources and from patients. From Government the sum of £75,446 was received, so that the total revenue of hospitals from all sources was £145,191. The following statement shows the revenue and expenditure of these institutions for the year 1891:—

	Metropolitan.	Country.	Total.
	£	£	£
Receipts—			
Government Aid	36,731	38,715	75,446
Private Contributions	19,758	30,480	50,238
Other sources	5,980	13,527	19,507
Total receipts	62,469	82,722	145,191
Expenditure—			
Building and Repairs	10,558	10,737	21,295
Maintenance	42,572	47,323	89,895
Miscellaneous	2,779	9,249	12,028
Total expenditure	55,909	67,309	123,218

Total expenditure by the State.

Accommodation in Asylums.

Benevolent Asylum, Sydney.

The expenditure in connection with the Little Bay Hospital has not been included above, being entirely in the hands of the Government. At this hospital, 1,899 patients were treated during the year; and the average number resident daily was 193 patients; the average stay in hospital was 40 days. There were 56 deaths, and 1,373 patients were discharged cured, 276 relieved, and 28 unrelieved. The number of lepers under detention at the lazaret on 31st December, 1891, was 21. The cost of this institution was £15,304, so that the total expenditure of the State on hospitals amounted to £90,750, and the gross expenditure by the Government upon all hospitals and asylums, with the exception of asylums for the insane and Mission Stations of Aborigines, was £177,395, and inclusive of those institutions the amount would be increased to £278,006. This sum includes £26,986 to the State Children's Relief Department, £14,653 paid to support the asylum for old men at Liverpool, £8,674 for the asylum for the aged and infirm at Newington, Parramatta River; £23,273 for the two asylums and the cottage homes for married couples at Parramatta, and £7,811 for the Benevolent Asylum, Sydney. In these last-mentioned asylums, the number of wards or dormitories was 178, with a total capacity of 1,538,069 cubic feet, giving an average air space of 8,647 cubic feet to each dormitory. There were 2,884 beds; the average air space to each patient was therefore 533 cubic feet. The number of inmates in each institution will be found in tables on pages 562 and 563, but in addition, considerable aid was extended to the outside poor. Apart from medical advice and medicines, out-door relief consists largely of supplies of provisions. Information is not to hand for the full extent of the relief thus afforded at all institutions, but the goods gratuitously distributed at the Benevolent Asylum, Sydney, during the year 1891 were as follows:—Bread, 99,775 loaves; flour, 56,758 lb.; beef, 13,294 lb.; mutton, 26,580 lb.; tea, 6,806 lb.; sugar, 27,522 lb.; sago, 2,496 lb.; rice, 3,454 lb.; oatmeal, 3,525 lb.; arrowroot, 128 lb.; raisins, 738 lb.; and milk, 296 quarts. Boots, blankets, flannel and other drapery goods, formed portion of the bounty distributed; and in addition to this a sum of money was granted in payment of rent allowances, so that many of the needy were assisted by the helping hand of this deserving charity in their own homes.

The Infants' Home, Ashfield; the Hospital for sick children, Glebe; the Institution for the deaf and dumb, and the blind, Newtown, besides other institutions in different parts of the Colony, receive help from the State; but they are maintained principally by private contributions. The management of these, and, indeed, of almost all institutions for the relief of the sick, is in the hands of committees elected by persons subscribing towards their support.

The following table shows the number of persons in charitable institutions mainly supported by private charity at the end of each year, 1886–91:—

Institution.	1886.		1887.		1888.		1889.		1890.		1891.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Industrial Blind Institution, Sydney	21	..	22	..	25	..	30	..	31	..	32	..
Consumptives' Home, Picton ..	19	8	22	10	24	8	21	9	20	5	17	8
House of the Good Samaritan, Sydney.	..	80	..	60	..	58	..	63	..	64	..	66
Sydney Female Refuge	..	48	..	44	..	39	..	51	..	42	..	35
Infants' Home, Ashfield (Children)	20	15	8	15	28	28	59	59	34	28	27	25
Infants' Home, Ashfield (Women)..	..	19	..	22	..	22	..	*	..	*	..	19
Industrial Home for Blind Women, Petersham.	..	..	..	14	..	17	..	14	..	15	..	12
Total	60	170	52	165	77	172	110	196	85	154	76	165

NOTE.—In addition to above, there are several Institutions under the control of the Roman Catholic body, and supported entirely by private charity.

* Information not supplied.

Charitable asylums.

Besides hospitals properly so called, there exist various institutions for the reception of fallen women, for the treatment of the blind, and the deaf and dumb; for destitute women, for casual aid to indigent persons, for the help of discharged prisoners, and for many other purposes which rouse the charity of the people. Exact figures respecting every institution have not been procurable. The foregoing table gives the number of adult persons remaining at the close of 1891 in some of the institutions named, and may be taken as representing the average for the year. The figures for the City Night Refuge and Soup Kitchen show only the number of persons usually retained about the establishment. There were 80,027 meals given during the year ending 30th June, 1891, at the Refuge, and shelter was provided in 23,836 instances, the daily average being 219 meals, and 65 nightly shelters.

City Night Refuge.

Destitute children.

The problem of dealing with destitute children and those liable from their environment to become criminal is naturally surrounded with very great difficulty, and its solution was attempted many years ago by the establishment of the orphanages at Parramatta, and the destitute children's asylum at Randwick, as well as the Vernon Training Ship for boys, and the Biloela Reformatory and Industrial School for girls. The system of crowding children in large establishments was rightly considered as open to many grave objections, and in 1880 a scheme of separate treatment was inaugurated. Accordingly an Act was passed by the Legislature, empowering the formation of a Board, to whose charge the destitute or neglected children of the Colony were entrusted. The Board was empowered to take children from the various institutions, and deal with them in certain specified ways.

State Children's Relief Board.

During the eleven years ending 5th April, 1892, the number of children placed out by the State Children's Relief Board had increased to 4,384. Of these 1,988 were reclaimed by their relatives or friends, or otherwise discharged, and 157 were adopted principally by persons possessing no children of their own. The number under the control of the Board in April, 1892, was 2,396, of whom 1,390 were boys, and 1,006 girls. Of these 776 boys and 613 girls were boarded-out under payment to persons deemed eligible, at rates varying from 5s. to 10s. per week, the officers of the Board being required to exercise a strict supervision to ensure that the children are not neglected or illtreated. In addition to

Supervision of children.

those boarded-out, 69 boys and 94 girls were adopted, by which arrangement a subsidy to the amount of £1,885 was saved. At the age of 12 years, children, if physically fit, may be apprenticed; and since the Board has had control, 545 boys and 299 girls have been indentured. The majority of the girls are sent to domestic service, and about two-thirds of the boys have been apprenticed to farmers. For the year ending April, 1892, 474 children were boarded-out, while the number apprenticed at the same date was 844, against 838 for the previous year. The number of children remaining in the institutions in April, 1892, were distributed as follows:—5 in the depôt, 6 in hospitals, and 133 consigned to cottage-homes for invalids, of which there are 2 at Parramatta, and 6 at Mittagong. Although as many as 810 passed through the Central Home at Paddington during the year, the system in force provides for their speedy removal to the country; and so the average daily number of inmates at that institution was only 8. Of the number under the Board's care 8 boys and 8 girls died during the year. In the annual reports of the State Children's Relief Department much interesting information is given concerning the problem of how to cope successfully with the difficulty of maintaining State children; and, after eleven years' experience of the boarding-out system in this Colony, it is claimed that when fairly tested the advantages that may be realised thereby, are much greater than those under the system of aggregating children in asylums.

The number of children under the control of the Board for each year ending April, since 1881, is shown in the following table:— Number of children under control.

Year ending April.	Boys.	Girls.	Total.	Year ending April.	Boys.	Girls.	Total.
1881	24	35	59	1887	1,099	703	1,802
1882	40	63	103	1888	1,202	758	1,960
1883	119	188	307	1889	1,316	857	2,173
1884	232	320	552	1890	1,380	904	2,284
1885	564	462	1,026	1891	1,417	952	2,369
1886	779	587	1,366	1892	1,390	1,006	2,396

Ages of children

The ages of children placed out since the inauguration of the Board's operations were :—

Year.	
Under 1	70
1 and under 2	89
2 ,, ,, 3	268
3 ,, ,, 4	364
4 ,, ,, 5	372
5 ,, ,, 6	380
6 ,, ,, 7	430
7 ,, ,, 8	411
8 and under 9	509
9 ,, ,, 10	483
10 ,, ,, 11	385
11 ,, ,, 12	328
Over 12	295
Total	4,384

The largest number of children dealt with by the Board have been received from the Benevolent Asylum, Sydney, 3,190 having been transferred up to the end of 1891; from the Randwick Asylum 306, and from the Orphan Schools, Parramatta, 362 children were taken. The orphan schools were closed in September, 1886, and the children who would formerly have been sent to them are now taken charge of by the Board. The remaining children were removed from other public institutions and hospitals; from the Vernon, 229; from the Infants' Home, Ashfield, 66; from Industrial School, Parramatta, 102; from Little Bay Hospital, 26; from Benevolent Asylum, Newcastle, 38; and other institutions, 65; making a total of 4,384 as aforesaid. The gross amount expended by the Government on the State Children's Relief Department during the year, including £724 collected as fees from parents, was £27,710.

Operations of Board successful.

Judged by the saving to the State effected by the Board, which cannot be placed at less than £15,000 per annum, its operations must be held to be entirely successful. But there are other and higher grounds of gratulation, for not only are the children individually more satisfactorily treated than could be the case in crowded institutions, but the number becoming a charge on the State is now proportionally less than formerly, and the admirable system of relief organized by the Board bids fair to solve the difficult problem of juvenile destitution and juvenile crime. The number of destitute children, including those detained at Biloela (now transferred to Parramatta) and on the Vernon, and in the various asylums, during each of the past ten years, was :—

Year.	Number.	Year.	Number.
1882	1,858	1887	1,973
1883	1,861	1888	2,091
1884	1,787	1889	2,218
1885	1,856	1890	2,077
1886	1,866	1891	2,111

The increase of 253 during the period bears but a small proportion of what might have been expected from the large increase in the juvenile population of the Colony.

Reformatories.

Three institutions are maintained at the charge of the State for the reformation of children: the Shaftesbury Reformatory, for girls who are in danger of becoming habitual criminals; the Parramatta Industrial School, for girls of more tender years; and the Sobraon, in place of the Vernon, training-ship, for boys. No reformatory exclusively for criminal boys exists; but the necessity for such an institution has long been recognized by the Government, and there is little doubt that such an establishment will shortly be provided. The Sobraon at present fills the double purpose of training-school and reformatory. The number of children in these institutions at the close of each of the last ten years was :—

Year.	Vernon.	Parramatta (formerly Biloela).	Shaftesbury.	Total.
1882	186	130	29	345
1883	213	119	27	359
1884	202	105	25	332
1885	202	106	29	337
1886	205	90	24	319
1887	203	90	26	319
1888	209	93	28	330
1889	227	87	42	356
1890	208	64	32	304
1891	230	80	32	342

Industrial School.

During 1887 the industrial school for girls was removed from Biloela, Cockatoo Island, to the building formerly occupied by the Roman Catholic Orphan School, Parramatta.

The numbers of destitute children in other charitable institutions at the close of each of the last ten years were as follows :—

Year.	Orphan Schools.	Randwick Asylum.	Benevolent Asylum.	Infants' Home, Ashfield.	State Children's Relief Department.	Total.
1882	442	643	156	50	222	1,513
1883	339	545	161	31	426	1,502
1884	150	352	149	54	750	1,455
1885	108	199	122	32	1,058	1,519
1886	*	254	130	35	1,128	1,547
1887	....	267	101	23	1,263	1,654
1888	....	246	168	56	1,291	1,761
1889	....	216	151	118	1,377	1,862
1890	....	212	161	62	1,338	1,773
1891	....	183	147	52	1,387	1,769

* Orphanages closed in this year.

Destitute adults.

The number of destitute adults, or persons 15 years of age and over, wholly or in part supported by the State as inmates of the various asylums of the Colony at the close of the year 1891 was 2,750, of whom 2,147 were males, and 603 females. The great majority of those in the asylums are persons of very advanced years and unable to work. The inmates of the Benevolent Asylum, Sydney, however, form an exception to this rule, as a large proportion of them are destitute women who use the institution as a lying-in hospital. The number of males and females in the various institutions with the ratio per 1,000 of adult population at the close of each of the past ten years was:—

Adult paupers.

Year.	Males.	Females.	Total.	Per 1,000 of Adult Population.		
				Male.	Female.	Total.
1882	980	402	1,382	3·5	1·9	2·8
1883	1,282	408	1,690	4·4	1·9	3·3
1884	1,363	435	1,798	4·5	1·9	3·4
1885	1,366	400	1,766	4·3	1·7	3·2
1886	1,504	448	1,952	4·5	1·8	3·4
1887	1,719	471	2,190	5·0	1·8	3·6
1888	1,820	521	2,341	5·1	1·9	3·7
1889	1,912	588	2,500	5·1	2·0	3·8
1890	2,039	582	2,621	5·2	1·9	3·8
1891	2,147	603	2,750	5·3	1·9	3·8

The following is the number of adults remaining in the various Benevolent Asylums at the close of the years 1882 to 1891 :—

Year.	Sydney (Pitt-street).	Newington.	Liverpool.	Parramatta.			West Maitland.	Newcastle.	Other Asylums.	Total.
				George-street.	Mac-quarie-st.	Cottage Homes.				
1882	88	284	733	219	30	...	13	...	15	1,382
1883	107	292	724	267	268	...	16	...	16	1,690
1884	115	312	724	339	276	...	16	...	16	1,798
1885	88	304	710	342	292	...	16	...	14	1,766
1886	83	331	741	421	297	...	35	27	17	1,952
1887	77	366	767	644	258	...	35	28	15	2,190
1888	97	397	778	721	286	...	36	26	...	2,341
1889	83	454	801	771	283	39	37	32	...	2,500
1890	92	462	789	867	288	42	39	28	14	2,621
1891	103	491	793	938	284	62	44	34	1	2,750

The Liverpool and Parramatta (2) Asylums are homes for males, and the Newington and Sydney Benevolent Asylums for females.

Cottage Homes.

The Cottage Homes opened at Parramatta in March, 1889, are for old and indigent married couples. The number resident at the end of 1891 was 43.

Adding together the numbers of adults and children in order to show the proportion, as compared with the whole population, of those dependent on the State for support, the ratios per 1,000 for the last ten years, are found to be as follows :—

Year.	Children.	Adults.	Total.	Per 1,000 of		
				Children under 15 years.	Adult Population.	Total Population.
1882	1,858	1,382	3,240	5·9	2·8	4·0
1883	1,861	1,690	3,551	5·3	3·3	4·1
1884	1,787	1,798	3,585	4·8	3·4	4·0
1885	1,856	1,766	3,622	4·7	3·2	3·8
1886	1,866	1,952	3,818	4·6	3·4	3·9
1887	1,973	2,190	4,163	4·8	3·6	4·2
1888	2,091	2,341	4,432	5·0	3.7	4·2
1889	2,218	2,500	4,718	5·3	3·8	4·4
1890	2,077	2,621	4,698	4·8	3·8	4·2
1891	2,111	2,750	4,861	4·7	3·8	4·2

Increase due to depression.

The increase noticeable during some years is probably due to the defective seasons experienced from time to time throughout the Colony, and the consequent closing of avenues of income which remained open to some of these old people, in more favourable times. The proportion of paupers to the whole population shown in the above table will appear extremely small compared with that of other countries. The proportion of population in the United Kingdom dependent upon the State for support was, at the beginning of the year 1892 :—

England and Wales	25·7	per thousand.
Scotland	23·0	,,
Ireland	31·4	,,
United Kingdom	26·1	,,

as against 4·2 per thousand in this Colony, a state of things plainly illustrating the happier lot of the people of Australia.

Treatment of insane.

The treatment of the insane is dealt with under the head of Vital Statistics. The average number of insane persons resident in hospital during the year was 3,149, while the total number under care was 3,959. These numbers include those resident at the Private Asylum. The gross expenditure on hospitals for insane, wholly supported by the State, during 1891, was £92,432 ; the collections from private sources amounted to £13,216, leaving a net cost to the Government of £79,216—equivalent to a weekly average cost of 10s. 5¼d. per patient, and an annual expenditure per head of population of 1s. 4½d. The total expenditure by the State on all institutions connected with the care of the insane, inclusive of the cost of maintenance of Government patients at the private asylum, Cook's River, was £100,112, and the total collections amounted to £13,580, so that the actual expenditure during the year was £86,532. The treatment meted out to the insane is that dictated by the greatest humanity, and the hospitals are fitted with all conveniences and appliances which modern science points out as most calculated to mitigate or remove the affliction under which these unfortunates labour.

Aborigines Protection Board.

A Board is in existence for the protection of the Aborigines, the object of which is to ameliorate the condition of the blacks, and to exercise a general guardianship over them. There are also three mission stations for the benefit of the Aborigines. These are Cumeroogunga, on the River Murray; Warrangesda, on the Murrumbidgee; and Breewarrina, on the Darling. The mission stations are under the control of a society called the Aborigines' Protection Association, who are responsible to the Board for their administration. The natives at these settlements are comfortably housed, and are encouraged to devote their energies to agricultural and kindred occupations, and elementary education is imparted to the children. The State expenditure during 1891 by the Board, including medical expenses, &c., was £11,218, and by the Association, £2,861, making a total of £14,079, besides which there were private contributions amounting to £354. The Aborigines are referred to at length in the part dealing with population and vital statistics.

Public and private expenditure in charity.

The total expenditure of the State in connection with all forms of relief and in aid of hospitals and other charitable institutions amounted in 1891 to £278,006; adding to this the amount of private subscriptions, &c., in hospitals, &c., the poor and the unfortunate have benefited during the year to the extent of about £376,800. This sum, though not excessive in proportion to the population, may yet appear large in view of the general wealth of the Colony, which should preclude the necessity of so many seeking assistance; for the present there is no risk that the charitable institutions will encourage the growth of the pauper element, and that free quarters and free food will be made so accessible that those who are disinclined to work will be tempted to live at the public expense.

Material and intellectual progress.

It will have been gathered from these remarks that in its anxiety to foster material progress, the State has not overlooked the care of those whom old age or misfortune has afflicted, nor has that psychical progress been neglected without which material advancement would be incomplete. The solicitude manifested for the spread of education and enlightenment, and the impartial toleration meted out to all forms of belief, leave nothing in these respects to be desired.

Intellectual progress.

The intellectual progress of the people has been even more rapid than their material advancement. Nor has this progress been confined to those sciences which are necessary for material prosperity. The State, conscious of the value of literature in softening the minds and manners of the people, encourages with great liberality the establishment of libraries and reading-rooms. In spite of their busy lives, the colonists of New South Wales have done something towards increasing the general wealth of the English literature, and with less stirring times—inevitable to the building-up of a nation—and the existence of a leisured class, the fruits of the care now lavished upon intellectual culture will be found in literature worthy of Australia.

PART XIX.

Internal Communication.

FOR many years, settlement was restricted to the narrow belt of land shut in between the Blue Mountains and the sea. Several main roads were formed through this country within a few years after the first settlement of the Colony. These roads connected the infant towns of Parramatta, Liverpool, Windsor, and Penrith with the metropolis, and were constructed entirely by prison labour. The abrupt wall of sandstone rising on the further side of the Nepean barred all access to the interior of the country. As early as the year 1796 George Bass made an attempt to cross the mountain range, and returned after an unsuccessful journey, reporting that it was impossible to find a passage even for a person on foot. In 1813, a protracted season of drought, attended by considerable losses amongst the stock, brought home very clearly to the settlers the conviction that the future of the Colony entirely depended upon the discovery of an extension of grazing land, beyond the narrow limits within which they were then hemmed. In the month of May of the year named, Gregory Blaxland, W. C. Wentworth, and Lieutenant Lawson once more attempted to find a passage across the mountains. After meeting with difficulties which seem astonishing enough to the present generation, who have seen a railway carried over the same track, by which Bathurst may be reached in a few hours, these gentlemen succeeded in opening a way—sometimes by creeping through dense forests, at others by scaling tremendous precipices—to the vast plains lying west of the great Cordillera of Australia. They returned on the 6th June, and shortly afterwards Governor Macquarie sent a party of surveyors, under Mr. Evans, to report

Bass's attempt to cross the mountain range

Blaxland, Wentworth, and Lawson discover a passage.

Construction of the Great Western Road.

on the practicability of making a road, and the report being favourable, the construction of the great western highway was at once commenced, the work being performed by gangs of prisoners. The track thus made formed a continuation of the great Western Road, from Penrith, and it was completed as far as Bathurst by the 21st January, 1815.

Impetus to road-making.

The discovery of the Bathurst Plains, and the completion of the mountain road, gave so great an impetus to settlement that it was found impossible to keep pace in the matter of roads with the demands of the settlers. The Government, therefore, contented itself with maintaining the roads already constructed, and extending them in the direction of the principal centres of settlement. For many years these main roads were the only ones which received attention. This would perhaps have been otherwise had the progress of settlement subsequent to 1850 been similar to that of the years previous to that date. Such, however, was not the case. The gold discovery entirely altered the circumstances of the Colony, and during the period of excitement and change which followed that remarkable event, so many new roads were opened, and so large an increase in traffic occurred, that the general condition of the public highways was by no means good. The Roads Department was formed as far back as 1857, and, although good service was done by the road pioneers before that date, the modern system of roadmaking may be said to have begun with the creation of the department. It was not, however, until 1864 that the whole of the roads, both main and subordinate, received attention at the hands of the State.

The principal main roads of the Colony are :—

Principal main roads.

Northern Road—length, 405 miles, from Morpeth to Maryland, New England.

Western Road—length, 338 miles, from Sydney to Warren through Bathurst, Orange, and many other important townships; thence prolonged to the Darling, at Bourke, by a line 175 miles in length.

Southern Road—length, 385 miles, from Sydney to Albury. This road was, before the construction of the railway, the great highway between Sydney and Melbourne.

South Coast Road—length, 250 miles. This road, after leaving Campbelltown, ascends the coast range, along the top of which it runs as far as Coal Cliff. It then traverses the Illawarra district, parallel to the coast, and passes through the rich lands watered by the Shoalhaven, Clyde, and Moruya, as far as Eden, at the southern limit of the Colony.

Importance of main roads less than formerly.

None of these roads have now the importance they formerly possessed. The railways of the Colony for the most part follow the direction of the main roads, and attract to themselves nearly all the through traffic. The tendency now is to make the roads act as feeders to the railway, by converging the traffic from outlying districts towards convenient stations along the line.

Government expenditure on public roads.

The expenditure by the Government upon the different roads varies considerably according to their importance. All roads maintained by the Government fall under seven classes. On first-class roads the Government expends yearly an amount equal to £50 per mile; on second-class roads, £40 per mile; third-class, £30 per mile; fourth-class, £20 per mile; fifth-class, £15 per mile; on sixth-class roads, £10 per mile; and on seventh-class roads, £5 per mile.

Supervision and maintenance of roads.

The network of roads spread over the face of the Colony is divided, for purposes of maintenance, into road districts and road trusts. The whole Colony is divided into six supervising Engineers' districts, each in charge of an officer who is directly responsible to the Commissioner and Engineer-in-Chief for Roads. These divisions are sub-divided into sixty-five road districts, managed locally by resident engineers, who have the greater part of the road communication of the Colony outside the municipal boundaries, as well as a portion of the roads within municipalities, under their care. The road trusts, which number 289, have the supervision of certain grants for the maintenance of roads in districts chiefly of minor importance. There are, however, certain important roads in the vicinity of the metropolis governed by trusts. The length of roads in charge of resident engineers at the close of 1891, was 31,878 miles, while about 2,008 miles are under road trusts. There are also 470 miles within municipal areas, which are annually subsidised by the Department, making a total of 34,356 miles under control. The length of road which has been formed, metalled, ballasted, and gravelled is not less than 10,073 miles. There are also 10,212 miles of road-way not indeed metalled, but which have been formed and drained, and on which all necessary culverts have been constructed, and 12,547 miles of road which wind their way through the forests of the interior, chiefly along the lines marked out by the cart-wheels of the foremost settlers, and form, in dry weather, adequate means of communication for the settlers, although it must be acknowledged that in seasons of rain these roads are not unfrequently impassable. Besides the roads mentioned above, there are 1,524 miles of mountain passes. Many of these passes presented the most formidable difficulties, and their construction reflects great credit upon the engineering skill of the officer, now deceased, who for so many years designed and supervised the construction and maintenance of the roads and bridges of the Colony.

Length of roads.

Bridges and culverts.

Many of the earliest bridges erected in the Colony were of stone, and are still existing. Those erected in the period following the extension of settlement to the interior were chiefly of timber, and have since been replaced, after a life of about twenty-five years. Nearly all the large bridges of recent erection are of iron or steel, and some of them have been erected under engineering conditions almost unique, owing to the peculiarity of the river-flow in some parts of the country. There are altogether 3,195 bridges, comprising 6,742 spans, covering a length of 218,507 feet, while there are also 24,352 culverts, 376,538 feet in length, and 9,084 causeways, with a total length of 213,054 feet. Where the traffic has not warranted their construction, or where local circumstances have

Punts and ferries.

rendered them inadvisable, instead of bridges, punts or ferries have been used. There are 99 punts, 7 of which are propelled by steam, and 92 by hand gear, along wire ropes. The number of boat ferries is 107, and there are also 2 ferries served by steam launches, besides which the Department has charge of 2 horse boats, and 75 flood boats. On an average, 1,757 men were employed each month, in addition to 5,438 men engaged by contractors, making a total of 7,195 men.

Value of roads and bridges.

The use of roads as the main arteries along which traffic from the metropolis to the interior flows has been superseded by the railways; but the roads remain not only the sole means of communication throughout a large part of the interior, but as most valuable feeders to the railway system of the country. No revenue is directly derived from roads, but the indirect advantages to the country have been very great, and after the lands and the railways they form the largest item of national property. It is estimated that £14,152,400 has been expended on roads and bridges since 1857, and the present value to the State, allowing for depreciation, cannot be less than £12,400,000. Their indirect value cannot be calculated, but as an instance of the change brought about by the system of road construction, it may be mentioned that, after the organization of the Roads Department on its present basis, the cost of carriage of goods by road and the time of transit was reduced by more than one-half, as will appear from the following statement:—

Indirect value.

Main Roads.	Distance.	Carriage by Road, 1857.		Carriage by Road, 1864.	
		Days of transit.	Cost per ton.	Days of transit.	Cost per ton.
	Miles.		£ s. d.		£ s. d.
Sydney to Goulburn	134	17½	12 5 0	7½	3 15 0
" Bathurst.........	145	23½	15 10 0	11	6 10 0
Newcastle to Murrurundi..	119	21	9 0 0	8	6 10 0

Cost of carrying goods by road and rail.

The progress exhibited in these seven years is very great. Part of the improvement may without hesitation be ascribed to better roads, but the decline in the demand for teams consequent on the cessation of the gold rush was also a cause of the lessened cost of transit. The price of carriage by road has not declined since 1864, most of the traffic being through districts remote from the centres of population, where the requirements of the teamsters are costly to supply. The roads followed by the teams are those leading to the railway lines, and the loading consists for the most part of station supplies, wool, and other produce. The rates vary according to the distance and the nature of the country traversed, but the following scale may be taken as typical of the ordinary charges for outward loading—that is, from the interior to the railways. Inward goods average about 1d. per mile less than those outwards :—

	s.	d.	
Up to 40 miles	1	6	per ton per mile.
,, 100 ,,	1	0	,,
,, 200 ,,	0	11	,,
,, 300 ,,	0	10	,,

heapness of ilway carriage.

A slight consideration of the foregoing statement will be sufficient to show how greatly the business of the country has been facilitated by the construction of the railways. If 100 miles be assumed as the average distance which goods are carried, the prevailing rate by teams would be 12d. per ton per mile. On the railways, as far back as 1872, the carriage was only 3·6d., and to-day it averages not more than 1·6d. It would be overstating the case against road carriage, however, if the last figures were compared with the average price charged by teams. A comparison in every respect perfectly fair can be made between the cost of carrying general merchandise, which is only 2·6d. per ton per mile, and that of goods by teams, which, as stated above, is 12d. per ton per mile. The saving, therefore, by rail carriage is 78 per cent., and if it were possible to imagine the whole of the railway traffic to be carried by teams the cost would have been £8,921,000, instead of £1,918,000 actually charged by the Railway Commissioners. In the portion of this chapter devoted to goods traffic on the railways, particulars are given of the gradual cheapening of this form of carriage during the past twenty years.

Expenditure on roads.

The total expenditure on account of roads of all classes during 1891 was £997,678; this sum, however, includes the administrative expenses of the department, expenditure on punt approaches, and similar works incidental to the road traffic of the country. In the following statement is given the expenditure on construction and maintenance of roads and bridges for thirty-five years, with the details of the past eleven years. Taking this table as a whole, it is plain that this form of expenditure has grown at a rate very much faster than that of the general population :—

Year.	Expenditure by Roads Department.	Expenditure by Trustees.	Total.
	£	£	£
1857 to 1880	5,430,923	782,907	6,213,830
1881	484,567	23,186	507,753
1882	577,212	24,722	601,934
1883	613,847	24,938	638,785
1884	750,584	27,722	778,306
1885	800,962	24,404	825,366
1886	628,379	28,414	656,793
1887	721,994	45,433	767,427
1888	663,929	31,503	695,432
1889	632,398	31,361	663,759
1890	770,809	34,500	805,309
1891	965,688	31,990	997,678
Total...	13,041,292	1,111,080	14,152,372

Municipal roads and streets.

Besides the roads maintained by the Government there existed, at the close of 1891, 6,281 miles of roads and streets belonging to and maintained by the municipalities of the Colony. Of these roads, 2,146 miles were regularly formed and metalled, and 1,252 formed, while 2,883 miles were not formed. The value of these roads is estimated at £4,285,100; but this estimate must be looked upon as an approximation only, since the information obtained from the various municipalities is not complete.

RAILWAYS.

The Sydney Tramroad and Railway Company.

The first attempt to introduce into New South Wales the blessings of railway communication, which has so revolutionised the commerce of the older parts of the world, was made in 1846. On the 26th August of that year a meeting was held in Sydney at which it was decided to survey a line to connect the metropolis with the city of Goulburn. Two years afterwards, on 11th September, 1848, the Sydney Tramroad and Railway Company was formed, with a capital of £100,000, having for its object the construction of railways to Parramatta and Liverpool, with a possible extension, in course of time, to Bathurst and Goulburn.

No time was lost in breaking ground, and on the 3rd July, 1850, the Hon. Mrs. Keith Stewart, daughter of the Governor, Sir Charles Fitzroy, turned the first sod of the first railway constructed in the Australian Colonies.

Railways transferred to State.

The affairs of the Sydney Tramroad and Railway Company did not, however, prosper as the promoters had expected, and it was found necessary to transfer the property of the company to the Government of the Colony. Meanwhile another company had been started in 1853, with the object of constructing a railway from the city of Newcastle to Maitland. It met with no more success than the Sydney company, and shared the same fate. On the Government taking possession of the property of the defunct companies, the works were carried on with more vigour, and on the 26th of September, 1855, the line from Sydney to Parramatta was declared open for public traffic, and the extension to Goulburn was opened on the 27th May, 1869.

The first line from Sydney to Parramatta.

The progress of railway construction during the twenty years which followed the opening of the first line was very slow, for in 1875 the length of the lines in operation had only reached 437 miles, or at the rate of 21·9 miles per year. Not a single mile

Progress of railway construction.

of railway was opened during 1865 and 1866; but in 1867 the construction of these great commercial highways received a new impetus, and continued to increase yearly until 1872, when it stood still for another period of two years, during which only 5 miles of railway were thrown open to traffic. In 1875 34 miles were opened, and from the succeeding year till 1889 greater activity prevailed 1,734 miles having been constructed, or a yearly average of 128 miles, but this impetus received a check, only 14 miles having been opened during the three following years. There were, however, 81 miles opened for traffic in the early part of July, 1892, and 47½ in October, while the number of miles under construction at the same date was 204½. The following table shows the number of miles of line opened in each year, as well as the total length in operation :—

Year.	Opened during the year.	Total opened.	Year.	Opened during the year.	Total opened.
	Miles.	Miles.		Miles.	Miles.
1855	14	14	1874	nil.	403
1856	9	23	1875	34	437
1857	17	40	1876	72	509
1858	15	55	1877	89	598
1859	nil.	55	1878	90	688
1860	15	70	1879	46	734
1861	3	73	1880	115	849
1862	24	97	1881	146	995
1863	27	124	1882	†280	1,275
1864	19	143	1883	52	1,327
1865	nil.	143	1884	298	1,625
1866	nil.	143	1885	114	1,739
1867	61	204	1886	157	1,896
1868	43	247	1887	‡152	2,048
1869	71	318	*1888	78	2,126
1870	21	339	*1889	45	2,171
1871	19	358	*1890	11	2,182
1872	40	398	*1891	nil.	2,182
1873	5	403	*1892	3	2,185

* Year ended June 30.

† Inclusive of Campbelltown-Camden line. ‡ Inclusive of Kogarah-Sans Souci line.

Of the 2,185 miles in operation in June, 1892, 2,033½ miles were single lines, 143 miles double, and 8½ miles of line with four tracks.

Extension of railway facilities.

The progress of the accommodation afforded by the State Railways of the Colony can be fairly gauged by comparing the number of persons at different periods to each mile of line open for traffic, and the number of train miles per inhabitant. Thus in 1860, there were 4,979 persons to each mile of line, but by the end of the year 1880 the work of construction was so much in excess of the increase of population that the proportion per mile had fallen to 881 persons, so that the facilities afforded by the railways were more than four times as great as in the year first named, while in 1892 the population per mile of line was reduced to 541. The increase in the number of train miles per inhabitant has been very rapid, rising from 0·5 miles in 1860, to 1·8 in 1870, 4·5 miles in 1880, and 7·4 in 1890, the 1892 figures being a little below those of the year last named. The following statement illustrates the extension of railway facilities for 1860 and subsequent periods :—

Year.	Population to each mile of line.	Number of train miles run.	Number of train miles run per head of Population.
1860	4,979	174,249	0·5
1865	2,861	483,446	1·2
1870	1,471	901,139	1·8
1875	1,360	1,472,204	2·5
1880	881	3,239,462	4·5
1885	546	6,638,399	7·2
1886	522	6,479,265	6·7
1887	498	6,472,107	6·4
*1888	487	6,689,313	6·6
*1889	491	7,641,769	7·3
*1890	505	8,008,826	7·4
*1891	524	8,410,421	7·5
*1892	541	8,356,096	7·2

* Year ended June 30.

Comparison with other countries.

Points of comparison between the railways of a large and thinly inhabited country such as New South Wales and the countries of the Old World are difficult to obtain. The following table, however, illustrates the population and area in square miles of territory per mile of line open in the principal countries of the world, compiled from the latest returns. It will be seen that New South Wales comes fairly well out of the comparison :—

Countries.	Length of Railway.	Population per Mile of Line.	Area per Mile of Line.
Australasia, including private lines :	Miles.		Square Miles.
New South Wales	2,266	521	137
Victoria	2,903	399	30
South Australia	1,679	191	226
Queensland	2,320	176	288
Western Australia	656	81	1,616
Tasmania	425	359	62
New Zealand	2,013	315	52
America :—			
Argentine Republic	7,210	567	156
Brazil	5,546	2,525	570
Canada	14,004	370	247
Chili	1,801	1,508	163
United States of America	158,037	396	23
Europe :—			
Austria-Hungary	15,854	2,595	15
Belgium	2,819	2,168	4
France	22,911	1,668	9
Germany	25,411	1,948	8
Great Britain and Ireland	20,073	1,880	6
Italy	7,619	4,061	15
Netherlands	1,632	2,787	8
Russia	21,116	4,540	99
Asia :—			
India (British)	16,095	13,068	66

Private lines.

Two private lines of railway, 45 and 36 miles in length respectively, were in operation during 1891, connecting the important towns of Moama and Deniliquin, and Silverton and Broken Hill. The first-named line virtually forms an extension of the Victorian railway system from Melbourne to Echuca. Some facts relating to the traffic of these lines will be found in another place. The following figures relate only to lines under Government control.

Capital expended.

The capital expended on all lines at the close of June, 1892, amounted to £33,312,608. The amounts expended on lines opened during each year from the commencement of the railway system will be found in the following table:—

Year.	Capital expended on lines open.	Year.	Capital expended on lines open.
	£		£
1855	515,347	1886	24,071,454
1860	1,422,672	1887	26,532,122
1865	2,746,373	*1888	27,722,748
1870	5,566,092	*1889	29,839,167
1875	7,245,379	*1890	30,555,123
1880	11,773,819	*1891	31,768,617
1885	21,831,276	*1892	33,312,608

* Year ended 30th June.

Length of railway lines.

The Colony of New South Wales stands in a good position among the Australasian Colonies in regard to railway development, as will be seen from the following table, which shows the length of lines open for traffic in the various colonies up to the end of June, 1892:—

	Lines Open.		
	Government.	Private.	Total.
	Miles.	Miles.	Miles.
New South Wales	2,185	81	2,266
Victoria	2,903	...	2,903
Queensland	2,320	...	2,320
South Australia	1,666	13	1,679
Western Australia	203	453	656
Tasmania	377	48	425
New Zealand	1,871	142	2,013
Total	11,525	737	12,262

Railway systems of Colony—Southern lines.

The railway system of the Colony is divided into three distinct branches, each representing a system of its own. The southern system, including the principal line in the Colony, branches at Junee, and places the important district of Riverina, as far as the town of Hay in one direction, and Jerilderie in another, in direct communication with Sydney—from which they are distant 454 and 412 miles respectively. From several other points of the line branches connecting other important districts with the metropolis have been opened for traffic, or are in course of construction. At Cootamundra a line has been laid down, which now reaches Gundagai, whilst from Murrumburrah a line has been constructed which connects Blayney on the western line with the southern and western systems of New South Wales Railways. This practically enables direct railway communication to be made between Melbourne and Bourke, the capital, so to speak, of Central Australia; and the branch line has been found of much benefit in allowing the direct shipment of stock from the pasture grounds to the Victorian markets. Nearer Sydney the important town of Goulburn will be the centre of a system of branch lines, one of which, that from Goulburn to Cooma, is already built, and brings the rich pastoral district of Monaro in direct communication with Sydney. Further west a branch line from Cootamundra to Temora is under construction; while a branch from Culcairn to Corowa, on the Murray, has just been completed.

Brisbane, Sydney, Melbourne, and Adelaide connected by rail.

The southern main line is the most important of the railway lines in the Colony, as it passes through the richest and most thickly populated districts, and places the four great capitals of Australia—Brisbane, Sydney, Melbourne, and Adelaide—in direct communication with each other. It was not until 1883 that this line was actually open for traffic, the railway bridge across the Murray River, which flows between Wodonga, the Victorian terminus, and Albury, the terminus of the southern line of New South Wales, having been completed in that year. The traffic, both of passengers and goods, on the southern system generally, is very extensive, and arrangements for the regular carriage of mails between the two great cities enable letters to be delivered in less than twenty hours. Sleeping cars are attached to these trains, on the New South Wales side, and the comfort of travellers is assured by the introduction of the most modern improvements in the construction and fitting up of the railway carriages. Since the completion of

Rapid transit of mails.

the railway from Melbourne to Adelaide, a distance of 508½ miles, European mails are landed at the latter port and forwarded overland to all parts of Victoria, New South Wales, and Queensland.

Western system.

The western system of railways extends from Sydney in the direction of the Blue Mountains, of which it reaches the upper levels a little above Emu Plains, by a system of zig-zag lines which enables the locomotive to drag its heavy freight up the abrupt eastern slope of the mountains. The line runs along the top of the range, until it descends into the valley below Mount Clarence, by another and more important zig-zag, the construction of which is a triumph of engineering skill. In its course between these two zig-zags the line passes through magnificent mountain scenery of a character peculiar to this part of the world, and none the less remarkable. Leaving the mountains, the Western Railway, after throwing out a branch from Wallerawang to Mudgee, enters the Bathurst Plains, and connects the rich agricultural lands of the Bathurst, Orange, and Wellington districts with the metropolis. Beyond Dubbo it enters the pastoral country, and reaches the Darling at Bourke, 503 miles from Sydney. At Orange a branch line, 22 miles in length, connects that town with Molong. This line is now being extended to Parkes and Forbes, and the extension will probably be opened for traffic before June, 1893. Further up, at Nyngan, 377 miles from Sydney, a branch line has been opened, connecting the important mining district of Cobar with Sydney, affording at the same time rapid and sure means of communication with the pastoral country, of which Cobar is also the centre. This line, it is expected, will eventually be continued as far as Wilcannia, on the Darling, whence it may be extended to the silver-fields of Silverton and Broken Hill. The western railway system also includes a short line from Blacktown to the Hawkesbury, *via* the towns of Windsor and Richmond.

Projected branch lines.

Northern system.

The northern system originally had its terminus at Newcastle, but a connecting line between Homebush and Waratah has been constructed, which makes Sydney the head of the whole of the

Hawkesbury River Bridge.

railway systems of the Colony. The Hawkesbury River has been crossed by an iron bridge, 2,896 feet long, in seven spans, the iron superstructure of which cost £327,000. This connecting line allows direct communication between Adelaide, Melbourne, Sydney, and Brisbane, a distance from end to end of 1,808 miles, and has been found of great value to those requiring quick transit, and for the carriage of postal matter. It facilitates, moreover, the active business life of the colonies, and will be of national importance should at any time strategic movements require to be made in connection with military operations.

Northern Railway.

The northern line runs *via* Newcastle and the great coal centres, through the rich agricultural district of the Hunter Valley, to the important part of the Colony known as New England, passing through some of the largest inland towns in New South Wales, such as Maitland, until lately the fourth town in the Colony in point of population, being surpassed only by the city of Newcastle and the town of Parramatta before Broken Hill attained its present development. The country traversed by this line north of Newcastle is extremely fertile. As the line ascends further north it passes through a rich pastoral and agricultural territory, and some important townships are reached, viz., Tamworth, Armidale, Glen Innes, and Tenterfield, and eleven miles beyond the last-mentioned township, the line crosses the border at Wallangarra or Jennings, where a junction is effected with the Queensland Railways.

Projected branch lines.

The northern system also comprises a branch from Werris Creek to Narrabri, which it has been proposed to extend as far as Moree, in the north-west, and the Darling in the west, thus placing the Namoi and Gwydir pastoral districts in direct communication with the ports of Newcastle and Sydney. In the New England District a line has been long projected, which would connect the town of Glen Innes with that of Inverell, on one side, and with the city of Grafton, on the Clarence, on the other; an alternative line has been surveyed to connect the Clarence and New

England districts, the proposed junction on the Northern line being at Llangothlin, but both this route and the one proposed from Glen Innes to Grafton present physical difficulties of such a magnitude that it is doubtful if either line will be carried out, at all events, for some time to come. A portion of the North Coast Railway, from the Tweed River to Lismore, on the Richmond, is now in course of construction, and a contract has been accepted for the section between Byron Bay and Murwillumbah; it is expected that the first and second sections of the line will be opened for traffic within twelve months.

North Shore Railway.

A short line has been constructed, branching off the main Northern line at Hornsby, 21 miles from Sydney, to Pearce's Corner, on the heights of St. Leonards; this line is now being extended from the latter place to the North Shore of Port Jackson, at Milson's Point. Proposals have been made from time to time to bridge the harbour, or tunnel under it, and thus allow direct communication by rail between the suburbs on the north and the city on the south shore.

Illawarra Line.

Besides the lines and branches included in the three systems above described, another line, entirely independent of them, has been constructed, connecting the metropolis with the coastal district of Illawarra, which is rich alike in coal and the produce of agriculture. The present terminus is at the thriving town of Kiama; but a continuation of the line is now being constructed to Nowra, a distance of 22½ miles, whence it is proposed to take it eventually to Jervis Bay, closely following the coast line. A proposal has also been made for the construction of a line from the port of Eden at Twofold Bay, in the south of the Colony, to the township of Bega, in the centre of a rich agricultural district; but this is at present in abeyance. A small suburban line has recently been commenced at Sydney to connect Marrickville and Burwood Road, a distance of 5 miles.

Steep gradients.

The New South Wales railways have been constructed with a large proportion of steep gradients. There are 629 miles of grades varying from 1 in 30 to 1 in 75, the worst of these being on the trunk lines, and so situated that the whole volume of traffic has to pass over them. The Railway Commissioners in their last Annual Report have drawn a comparison between the New South Wales lines and the Alpine railways, and it is found that the gradients are steeper, and the curves sharper, on the lines of this Colony than on the Alpine lines. In order to facilitate the working of the traffic the Commissioners introduced last year a more powerful class of engines, both of English and American manufacture, which have materially assisted the working of the lines. It is believed that the traffic will now be carried on more satisfactorily, and the expense of extensive duplication works, which might have been necessary under the system existing previously, will be saved. During the year ending 1892 an additional line has been laid down to Picton, and from Ryde to Hornsby, and the quadrupled lines to Flemington on the suburban line, have been brought into use. There are now completed four lines along the suburban section, a distance of 8½ miles, and a double line for traffic out of Sydney as follows:—South Coast line to Waterfall, 24 miles; Main Southern line to Picton, 53 miles; Main Western line to Penrith, 34 miles; and North Coast line to Hornsby, 21 miles.

Capital spent.

The capital spent on lines under construction on the 30th June, 1892, was £981,886, which includes £245,226 for the Nyngan to Cobar line, opened for traffic on 1st July, 1892.

Growth of traffic.

The contrast between the present condition of the New South Wales railways and their humble beginning in 1855 is a remarkable one. In 1856, the first year which can be fairly taken for purposes of comparison, the number of passenger journeys on the railways was only 350,724, whilst in the year ended June 30, 1892, the number was 19,918,916, or nearly 57 times greater; but the tonnage of goods carried in each of these years represents a very much larger increase, having grown from 2,469 tons to 4,296,713, or over 1,740 times greater than in the first full year of railway operations. For the first ten years of the period under review the larger part of the railway earnings was obtained from the passenger traffic, and this was no doubt due to the fact that the first railways were almost entirely suburban. It was not until the line crossed the mountains and opened up the far interior that the proportions changed, and the goods traffic became the principal source of revenue of the railways. This change began to take place in 1867.

Goods principal source of revenue.

Earnings in different years compared.

The comparison between the earnings of the period previous to 1871—when the net result every year represented only a small portion of the interest due on the capital expended in the construction of the lines—and the subsequent period affords matter for satisfaction. The figures for 1886 and 1887 show a falling off from those of fourteen previous years; but it should be borne in mind in comparing these two years with the excellent results exhibited during the period from 1874 to 1884, when an average of considerably over 4 per cent. was realized, that the fall in receipts is due in a great measure to the previous years of drought, and also to the uncertainty attaching to the land laws which had recently been materially altered.

Extensions in the interior.

During the years 1884 and 1885 the last section of the main western line, extending over a distance of 112 miles as far as Bourke, was opened, and the line branching off from Wallerawang was completed as far as Mudgee, 63 miles being opened. On the South-Western Railway the branch line, Narrandera to Jerilderie, covering a distance of 65 miles, was opened for traffic. All of these extensions run through very sparsely settled districts, and this was the case with regard to nearly the whole of the other 172 miles opened during the two years mentioned. This total of 412 miles opened for traffic in unproductive country caused a serious falling off in the proportion of receipts to expenditure during the period ending June, 1888, the net revenue yielding less than 3 per cent. on the total expenditure. Since then the returns have improved step by step, rising in the year 1891 to 3·6 per cent., at which it has since been maintained. In the Railway Report of 1892 a return is given, comparing the net results of lines which are not at present paying interest, for the three years 1887, 1890, and 1891, and from the progress which the latter year shows over the former there is every probability that in the near future the lines mentioned will earn sufficient to pay the interest on their cost. The fact that the lines as a whole have not returned a profit should occasion no surprise, as the statistics of railways in all the parts of the world show that few lines, except perhaps suburban ones, return anything like a profit during the first few years after their opening. In England a period of seven years has been allowed by good authorities for a line to develop traffic; and if such is the fact in more densely populated countries, whose resources are more developed than is the case in New South Wales, there is every reason to be satisfied with the fact that the lines of this colony have yielded so good a return as they have. And there is good cause to hope that under the present administration of the railways the deficiency will soon be met, as the returns for the year ended June 30, 1892, show that the interest on cost of construction was covered all but 0·24 per cent.

Period required to develop traffic.

A glance at the table of net earnings and interest on capital expended upon railways, which will be found on page 592, will show that during the period from 1870 to 1875, in which the length of new lines yearly constructed was very small, being only 119 miles during the whole period of six years, or about 19¾ miles per year, the railway profits show a constant and regular increase from 1·817 to 4·396 per cent. In 1877 and 1878 179 miles of railway were constructed, and the profits immediately show a decline to 3·741 and 3·341 per cent. respectively. From 1880 to 1884 the railways were extended chiefly to centres already populous and prosperous, viz., Riverina and New England, and the central districts of Goulburn, Wellington, and Dubbo; and as these were years of remarkable prosperity, the railway profits suffered less than usual from the considerable extension,

Extension reduce general returns.

which included the construction of the expensive connecting link joining the New South Wales Railways with those of Victoria, at the River Murray. From 1885 to 1892 the extensions on the main lines were for the most part through pastoral country, such as the continuation of the Western line to Bourke, of the Northern line to Wallangarra, and the further extensions of the lines in the Goulburn district to the rich pastoral lands of Monaro, while several branch lines were constructed tapping important agricultural and dairy-farming districts, notably the lines Cootamundra-Gundagai, Murrumburrah-Blayney, and Sydney-Kiama, and lately the connection of the important mining district of Cobar by a branch line from Nyngan, on the main Western railway. In some cases the value of the branch lines will not be felt until the entire system, of which they form part, is completed, or until they become trunk lines. For instance, in the case of the Goulburn-Cooma line, a proposal is under consideration for continuing this line to the Victorian border, with a branch line to Eden, Twofold Bay. It is expected that the Gippsland line will be extended from Bairnsdale to the border, and that by the junction of these two lines an alternative route to Melbourne will be obtained. In that case, no doubt, the Eastern part of Gippsland would find its natural port at Eden. Expensive new lines result in an increase of percentage of working expenses to the gross earnings, as these lines have to be kept in full working order and repair whilst actually returning in gross earnings little over the cost of maintenance. The small returns on expensive incompleted branches further tend to diminish greatly the profits of a railway system taken as a whole; but such is the history of railway construction in all parts of the world, and New South Wales is no exception to the general rule.

Alternative route to Melboune.

Scheme for the construction of new railways.

The Railway Commissioners in their Annual Report for 1891 suggest a plan for paying for new lines from the sale of lands. They recommend that the Crown Lands for a distance of 10 miles each side of proposed railways should be set aside for sale, and half the proceeds of the land sold to be credited to the

Railway Capital; and where the land required for railway construction has passed into the hands of private individuals that the land-owners should combine and convey the necessary land free of cost to the Government, it being considered that the owners would be fully remunerated for the gift of the land by the enhanced value of their property through direct railway communication being established with the other parts of the Colony. By the adoption of this system it is believed that railways in light undulating country could be constructed at a moderate cost, and yield a fair return on capital from the commencement, especially what are known as "Pioneer Railways," which could be constructed at an average of about £1,750 per mile, exclusive of bridges.

The Betterment system.

The Betterment system as applied to railways was first introduced in the construction of the Culcairn to Corowa Railway. No special Act has been passed for the general establishment of this principle, but by a proviso in a clause of the Public Works Act, the Government were empowered to apply the principle to all railways constructed subsequently to the date of the passing of the Act. In estimating the enhanced value of the land adjoining the Culcairn to Corowa Railway line, now just completed, the stations were assumed to be 10 miles apart, the Betterment area having a 5-mile radius from each station, and the land in the vicinity of each station being considered to have an enhanced value of 25 per cent., graduating to 5 per cent. at the limit of the radius. In the case of the extension of the railway along the Southern Coast it is found that the enhanced value does not reach so high a percentage, owing to the facilities which exist for the transport of produce, &c., by water.

Average per mile.

The following table shows the cost of construction of the various branches of the railway system of the Colony to the middle of the year 1892. The average cost for the whole of the lines is calculated to be £12,974 per mile, including all charges, except for rolling-stock, machinery, and workshops, a figure, which, considering the character of some parts of the country through which

Cost of lines.

the lines have been carried, and the cost of labour, which is considerably greater in Australia than in most other countries, is by no means a high one :—

Lines opened for Traffic.		Length in Miles.	Total Cost.	Cost per Mile.
			£	£
Darling Harbour Branch		1	357,117	357,117
Sydney to Granville		13	1,843,348	141,796
Haslem's Creek Branch..		½	6,459	12,918
Granville to Wodonga		374½	4,877,481	13,024
Junee to Hay		167	950,158	5,689
Narrandera to Jerilderie		65	409,481	6,299
Granville to Bourke		490	5,343,040	10,904
Wallerawang to Mudgee		85	981,042	11,541
Blacktown to Richmond		16	175,058	10,941
Goulburn to Cooma		127½	1,403,220	11,005
Cootamundra to Gundagai		34	238,052	7,000
Orange to Molong		22	269,329	12,242
Murrumburrah to Blayney		106	1,078,160	10,171
Sydney to Kiama		70	1,945,591	27,794
Homebush to Waratah		93½	2,538,147	27,146
Newcastle to Wallangara		391	4,930,655	12,610
Werris Creek to Narrabri		97	565,258	5,827
Bullock Island Branch		1½	85,349	56,899
Morpeth Branch		4	60,895	15,224
Hornsby and St. Leonards		11	212,981	19,362
Campbelltown to Camden	Tram lines.	7½	38,927	5,190
Kogarah to Sans Souci		5	12,111	2,422
Yass Tramway		3	27,041	9,014
		2,185	28,348,900	12,974

Various charges.

The amount expended on rolling-stock to the period named was £4,047,316 ; for machinery, £275,089 ; workshops, £631,870 ; and furniture, £9,433, or £4,963,708 in all. This makes the total cost of all lines open for traffic, £33,312,608, or an average on all charges of £15,246 per mile.

Lines in pastoral country less costly.

In considering these figures in detail it is interesting to note the comparative low cost per mile of the extensions through the pastoral country from Junee to Hay, and from Werris Creek to Narrabri, which average only £5,689 and £5,827 per mile respectively, or less than half the general average cost of other lines. The Campbelltown-Camden and the Kogarah-Sans Souci lines were constructed cheaply for tram-lines.

Cost in other countries.

The cost of railway construction in some of the principal countries of the world, for which figures are available, is given hereunder. The figures include the whole expense of equipping the lines for traffic, and are brought down to the latest dates available:—

Countries.	Cost per Mile open for Traffic.
	£
United Kingdom	43,955
Belgium	28,271
France	27,375
Germany	20,201
Russia in Europe	12,047
India	13,010
Canada	12,182
United States of America	12,388
Cape Colony	8,604
Australasia :—	
New South Wales	15,246
Victoria	13,153
New Zealand	7,838
Queensland	6,917
South Australia	6,923
Tasmania	8,200
Western Australia	4,459

EARNINGS AND WORKING EXPENSES.

Gross earnings and working expenses.

The gross amount of revenue derived from all sources during the year ended 30th June, 1892, was £3,107,296, a larger sum than was obtained in any previous year. The cost of working the railways reached £1,914,252, and the net earnings were £1,193,044, or 38·4 per cent. of the total earnings, as against 33·3 per cent. when the Commissioners took office. The following table gives the gross earnings and total working expenses with the proportion per cent. of the expenditure to the receipts :—

Year.	Gross Earnings.	Working Expenses.	Percentage of working expenses to gross earnings.	Year.	Gross Earnings.	Working Expenses.	Percentage of working expenses to gross earnings.
	£	£	per cent.		£	£	per cent.
1855	9,249	5,959	64·4	1886	2,160,070	1,492,992	69·1
1860	62,269	50,427	81·0	1887	2,208,294	1,457,760	66·0
1865	166,032	108,926	65·6	*1888	2,295,124	1,530,551	66·7
1870	307,142	206,003	67·1	*1889	2,538,477	1,634,602	64·4
1875	614,648	296,174	48·2	*1890	2,633,086	1,665,835	63·3
1880	1,161,017	647,719	55·8	*1891	2,974,421	1,831,371	61·6
1885	2,174,368	1,458,153	67·1	*1892	3,107,296	1,914,252	61·6

* Year ending 30th June.

Economical management.

In the foregoing table will be found ample evidence of the economical working of the State railways under their present management, and this notwithstanding the expenses per train mile have increased. The explanation of this increase in the expense per train mile will be found in the fact that although the business has increased the management have contrived to reduce the mileage run, and have, at the same time, effected a thorough overhaul of the property in their hands. The distribution of expenses is shown below :—

	1875.	1880.	1885.	1891.	1892.
	d.	d.	d.	d.	d.
Maintenance of Way	10·85	11·40	15·71	12·75	13·91
Locomotive Power	17·40	16·33	15·62	17·80	18·49
Repairs—Carriages, Waggons, &c.	3·20	2·47	2·65	4·47	4·62
Traffic Charges	14·38	15·83	14·92	15·04	16·01
Compensation	0·30	0·50	0·30	0·50	0·22
General Expenses	2·15	1·46	3·52	1·70	1·73
Total	48·28	47·99	52·72	52·26	54·98

Proportion of earnings.

The following table gives the percentage of earnings from the two sources of Railway Revenue. It will be observed that in the year 1860 the earnings from passenger traffic largely exceeded those from goods, but after that year the proportion declined, reaching the minimum in 1875. This falling off was almost entirely due to the considerable extension of the main lines through pastoral country, thinly populated, but well stocked with sheep and cattle, and consequently furnishing the railway with large quantities of produce for carriage to the sea-board. Since 1880, however, the percentage of receipts from passengers has advanced, and now contributes about 38·3 per cent. of the total revenue, figures which compare not unfavourably with those obtained on the English lines from the same source—44 per cent.:—

Year.	Percentage of		Year.	Percentage of	
	Passenger Earnings to Total.	Goods Earnings to Total.		Passenger Earnings to Total.	Goods Earnings to Total.
1860	73·0	27·0	1887	38·5	61·5
1865	56·0	44·0	1888*	40·1	59·9
1870	38·4	61·6	1889*	40·4	59·6
1875	33·5	66·5	1890*	40·2	59·8
1880	33·6	66·4	1891*	39·6	60·4
1885	38·2	61·8	1892*	38·3	61·7
1886	39·3	60·7			

* Year ending 30th June.

Net revenue.

The net revenue for the year which expired on the 30th June, 1892, was £1,193,044, while the total amount of capital expended on lines in operation to the same period was £33,312,608. The net return on the capital expended equalled 3·581 per cent., which, with the exception of that realised in 1891, is the most satisfactory return obtained since 1884, and, as will hereafter appear, only 0·24 per cent. below the average interest payable on all outstanding loans of the Public Debt. The following table shows the net earnings and interest on capital expended in railways, including both construction and equipment, for the year 1855 and subsequent periods :—

Year.	Net Earnings.	Interest on Capital.	Year.	Net Earnings.	Interest on Capital.
	£	per cent.		£	per cent.
1855	3,290	0·638	1886	667,078	2·901
1860	11·842	0·832	1887	750,534	2·965
1865	57·106	2·079	1888	764,573	2·852
1870	101·139	1·817	1889	903,875	3·144
1875	318·474	4·396	1890	967,251	3·176
1880	513·298	4·358	1891	1,143,050	3·598
1885	716,215	3·370	1892	1,193,044	3·581

NOTE.—Since 1887 the accounts have been made up to the 30th June in each year.

Net earnings.

Two important facts, demonstrating the financial position of the railways, and the character of the management, are the earnings per train mile, and per average mile open. Although the returns now being realised cannot be compared with those of 1875, when the earnings per train mile fell little short of 52d., and per mile open £775, the present earnings are in every way encouraging. Under the control of the Commissioners the net return per train mile has increased from 27·4d. to 34·3d., or 25·2 per cent., while per mile of line open for traffic the advance has been from £374 to £547, or 46·3 per cent. The following table gives details in periods back to 1860 :—

Year.	Net Earnings Per—		Year.	Net Earnings per—	
	Train Mile Run.	Average Mile Open.		Train Mile Run.	Average Mile Open.
	d.	£		d.	£
1860	15·9	189·5	1887	27·8	387·7
1865	28·3	399·3	1888*	27·4	374·0
1870	26·9	307·4	1889*	28·4	424·7
1875	51·9	774·8	1890*	29·0	444·3
1880	38·0	653·1	1891*	32·6	523·8
1885	25·9	430·6	1892*	34·3	546·6
1886	24·7	372·6			

* Year ended 30th June.

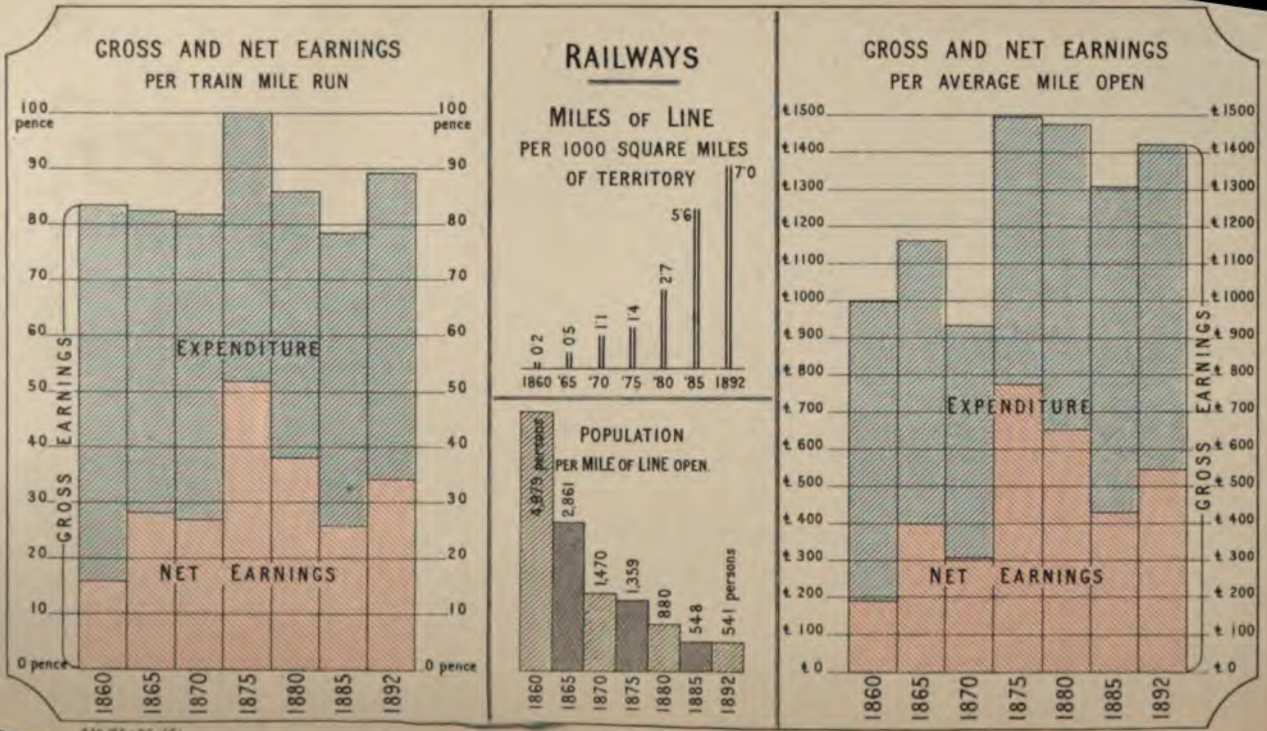

PHOTO-LITHOGRAPHED AT THE GOVT. OFFICE.
SYDNEY, NEW SOUTH WALES.

PASSENGER TRAFFIC.

Journeys per head of population.

The number of journeys made by each person in the Colony now averages 17·1 per annum, as against 7·5 in 1880 and 1·6 in 1870. The increase has been exceedingly rapid as well as fairly uniform, as will be seen from the following table :—

Year.	Number of Journeys.	Year.	Number of Journeys.
1855	0·4	1886	15·4
1860	1·6	1887	14·4
1865	1·9	*1888	14·9
1870	1·6	*1889	15·3
1875	2·3	*1890	15·8
1880	7·5	*1891	17·0
1885	14·6	*1892	17·1

* Year ended 30th June.

Journeys per head in different Countries.

The figures just given include journeys of season-ticket holders; excluding this traffic, the number of journeys per head would be about 10·9, a number larger than the average of any of the adjacent colonies, Victoria excepted. The average number of journeys performed by inhabitants of the United Kingdom is 22·4, which largely exceeds that of any other population. With this exception, railway travelling is more common in Victoria, South Australia, and New South Wales than in any other country. The average of some of the more important places are :—Belgium, 12·6 ; France, 6·3 ; Germany, 7·6 ; United States, 8·3 ; Austria-Hungary, 1·8 ; Russia, 0·4 ; South Australia, 17·5 ; Queensland, 6·4 ; Western Australia, 9·9 ; New Zealand, 5·6 ; Tasmania, 4·8.

Number of passengers carried.

The total number of persons travelling, including season ticket-holders, and the revenue received in stated periods ending with the year 1892, are shown in the next table, which should be read in connection with that just given :—

Year.	Number of Passenger journeys.	Receipts.	Year.	Number of Passenger journeys.	Receipts.
		£			£
1855	98,846	9,093	1886	14,881,604	849,253
1860	551,044	45,428	1887	14,451,303	850,499
1865	751,587	92,984	1888	15,174,115	918,975
1870	776,707	117,854	1889	16,086,223	1,025,601
1875	1,288,225	205,941	1890	17,071,945	1,059,791
1880	5,440,138	390,149	1891	19,037,760	1,177,037
1885	13,506,346	830,904	1892	19,918,916	1,189,231

NOTE.—Since 1887 the accounts have been made up to the 30th June in each year.

Suburban traffic

The traffic on the suburban lines, which include only distances within 20 miles of Sydney and Newcastle, Liverpool and Morpeth included, has enormously increased of late years. The following are the particulars for the last three years :—

Year.	*1890.	*1891.	*1892.
Number of ordinary passengers ...	8,594,942	9,384,425	10,148,765
,, workmen's journeys...	1,990,368	2,422,644	2,577,996
,, Season ticket holders' journeys............	3,936,180	4,127,192	4,240,094
Total passenger journeys	14,521,490	15,934,261	16,966,855
Number of miles travelled	83,216,224	89,270,546	92,609,491
Average mileage per passenger ...	5·73	5·61	5·46
Amount received from passengers	£233,465	£252,271	£261,744
Average receipts per mile, per passenger..............................	0·67d.	0·68d.	0·68d.

* Year ending 30th June.

Receipts per head of population.

The average receipts from passenger traffic per head of population have very rapidly advanced, and for 1892 stood at 20s. 4·9d., as against 10s. 8·5d. in 1880, and 4s. 9·7d. in 1870. This is not due, as might be supposed, to the increased distance travelled by passengers, so much as to the fact that the railway mileage has increased at a greater rate than the population enabling the public to indulge in a larger measure of railway travelling, in accordance with the well-established rule that the more facilities for travelling are extended, the greater will the traffic be. In this connection it may be interesting to note that the fares charged on the suburban lines, over which the majority of passengers travel, are very much less for both classes of travellers than the English rates, although the cost of working is very much higher. The receipts from passenger traffic per head of the population will be found in the following figures:—

Year.	Amount per head.	Year.	Amount per head.
	s. d.		s. d.
1860	2 7·8	1887	16 11·1
1865	4 7·8	*1888	18 0·2
1870	4 9·7	*1889	19 6·2
1875	7 10·2	*1890	19 7·1
1880	10 8·5	*1891	20 11·8
1885	17 11·1	*1892	20 4·9
1886	17 6·2		

* Year ended 30th June.

GOODS TRAFFIC.

Analysis of the goods traffic.

The weight of goods carried per head of population in New South Wales compares favourably with that of many countries where railways have been long established. The average tonnage for 1860 and subsequent periods was:—

Tonnage of Merchandise carried per head of Population.

Year.	Tons.	Year.	Tons.
1860	0·2	1887	3·3
1865	1·2	*1888	3·3
1870	1·6	*1889	3·3
1875	2·2	*1890	3·5
1880	2·4	*1891	3·4
1885	3·5	*1892	3·7
1886	3·3		

* Year ended 30th June.

Tonnage of merchandise compared with other countries.

The largest amount of tonnage per inhabitant is in Scotland, where it averages 10·4; the lowest European countries are Italy, Russia, and Austria-Hungary, with only 0·5 tons per head. The relative position of New South Wales will be seen from the next table which shows the tonnage of merchandise moved per head of population in the principal countries of the world :—

	Tons.		Tons.
Scotland	10·4	Australasia	3·4
England and Wales	9·7	New South Wales	3·7
United States	9·4	Victoria	3·9
Belgium	6·6	Queensland	2·0
Germany	3·7	South Australia	3·7
Canada	4·0	Western Australia	1·8
France	2·2	Tasmania	1·1
Ireland, British India	0·8	New Zealand	3·4
Italy, Russia, and Austria-Hungary	0·5		

Expansion of traffic business.

The following figures, which extend in periods as far back as the first opening of the lines, show how greatly the traffic business has expanded, especially in recent years. It is very satisfactory to note that although all the main trunk lines have been constructed for several years, the volume of goods carried is still increasing faster than the population :—

Year.	Tonnage of Goods.	Earnings.	Year.	Tonnage of Goods.	Earnings.
		£			£
1855	140	156	1886	3,218,582	1,310,817
1860	55,394	16,841	1887	3,339,253	1,357,796
1865	416,707	73,048	1888	3,399,772	1,376,149
1870	766,523	189,288	1889	3,485,839	1,512,876
1875	1,171,354	408,707	1890	3,788,950	1,573,295
1880	1,712,971	770,868	1891	3,802,849	1,797,384
1885	3,273,004	1,343,464	1892	4,296,713	1,918,065

Classification of tonnage.

It is unfortunately impossible to subdivide the tonnage of goods just given for 1892 into anything approaching a general classification, but this can be done for the year which closed with December, 1891. In the statement here given, which relates to the year in question, will be found particulars of the tonnage under eight broad classes, the average distance goods of each class were carried, and the average revenue per ton per mile—this last figure, however, does not include the terminal charges, which would probably increase the revenue per ton per mile from 1·6 to 1·9d. :—

Description of Traffic.	Tons carried.	Average number of miles each ton of traffic is carried.	Revenue per ton per mile.
			Pence.
Coal and shale	2,673,378	17½	0·8
Firewood	176,790	26¾	1·1
Grain and flour	198,491	111½	0·7
Hay, straw, and chaff	64,967	154¼	0·5
Miscellaneous and A class	581,010	46½	0·9
Wool	111,797	270¾	2·5
Live stock	128,211	270¼	1·9
General merchandise and other traffic not classified	427,589	152½	2·6
Total	4,362,233	55¼	Average 1·6

Charge per ton per mile.

The statement which is given below shows the receipts for carrying goods one mile along the lines of the Colony. The information reaches back to 1872, when the charge was 3·6d. while after an interval of twenty years it had fallen to 1·9d. Some of the decrease, however, is more apparent than real, inasmuch as it represents a more extensive development of the mineral trade than of the carriage of general merchandise; but when due allowance has been made on this score, it will be found that the benefit to the general producer and consumer has been very substantial :—

1872	3·6d.
1873	3·3d.
1874	3·0d.
1875	3·1d.
1876	2·8d.
1877	2·7d.
1878	2·4d.
1879	2·3d.
1880	2·3d.
1881	2·3d.
1882	2·1d.
1883	2·0d.
1884	1·9d.
1885	1·9d.
1886	1·8d.
1887	1·8d.
1891	1·9d.

The figures just given should not be too strongly relied upon in comparing one year with another, but may safely be taken as indicating generally the lessened cost of carriage to persons forwarding goods by rail. The reduction is most noticeable in regard to agricultural produce and live stock.

The revenue from goods traffic per inhabitant rose rapidly from the opening of the lines until the year 1883, when it stood at 30s. 4d., at which figure it remained in 1884 also. The unfavourable seasons experienced during the subsequent years greatly affected the traffic, which in 1888 had fallen to 27s. per inhabitant. Since that year there has been a steady increase, and in 1892 the amount stood at 32s. 11d.—the highest figures yet attained. This is a very satisfactory result to be achieved notwithstanding a general reduction in the freights :—

Year.	Amount.	Year.	Amount.
	£ s. d.		£ s. d.
1860	0 0 11·8	1887	1 7 0·3
1865	0 3 7·8	*1888	1 6 11·7
1870	0 7 8·7	*1889	1 8 9·4
1875	0 13 11·8	*1890	1 9 1·0
1880	1 1 1·9	*1891	1 12 0·5
1885	1 8 11·7	*1892	1 12 11·0
1886	1 7 0·5		

* Year ended 30th June.

Lines open and under construction.

On the 30th June, 1892, the length of line open for traffic was 2,185 miles, a short line of about 3 miles, between the railway station and the town of Yass, having been opened during the year. The line from Nyngan to Cobar, a distance of 81 miles, was opened for traffic on the 1st July, and at the beginning of October the line from Culcairn to Corowa, 47½ miles, was brought into use, making a total of 2,313½ miles open. In addition to these the following lines are approaching completion, and will shortly be available for traffic: Kiama to Nowra, 22½ miles; Molong to Parkes and Forbes, 72¾ miles; and Milson's Point extension, 2¾ miles. The following lines are also under construction: Lismore to the Tweed, 62½ miles; Cootamundra to Temora, 39 miles; and Marrickville to Burwood Road, 5 miles.

Rolling stock

The rolling stock of the New South Wales railways, on the 30th June, 1892, consisted of 489 engines, 1,054 coaching stock, and 10,455 goods vehicles, making a total of 11,998 stock, and showing an increase of 50 locomotives, 31 coaching stock, and 515 goods vehicles, over the stock of the previous year. The number of engine miles run was 12,362,105, while the train miles numbered only 8,356,096.

Cost of railways.

The cost of the lines open for traffic on 30th June, 1892, as already stated, was £33,312,608, to meet which £31,821,489 has been realized by the issue of debentures and inscribed stock of the nominal value of £33,244,286, the balance having been paid out of the general revenue of the country. Debentures of the value of £1,182,275 have been finally paid off, and £3,688,547 renewed, leaving £28,373,464 still outstanding on the 30th June, 1892. The amount of interest payable on that date was £1,119,901.

Outstanding debt.

Wages paid.

During the year which closed with the end of June, 1892, the wages paid by the Railway Department amounted to £1,274,394, as against £1,279,953 in the previous year. Of this sum the Maintenance Branch took £417,216, and the Locomotive Branch £545,695, while the Traffic Branch absorbed £311,483. Additions and improvements to stations, buildings, siding accommodation, &c., and rolling stock during the year cost £624,858, which sum was charged to capital account. Compensation for personal injury was paid to the amount of £3,580, and for damage to and loss of goods, £4,223.

Number of employees.

There were altogether 10,638 persons employed by the Railway Department, of which number 1,602 comprised the salaried staff, and 9,036 were on wages. For the previous year the total number was 10,942, of whom 1,444 were on salary and 9,498 on wages.

Management.

The management of the State railways of New South Wales was in the hands of a single Commissioner, under the Secretary for Public Works, up to the month of October, 1888. At that date the service was transferred to the department of the Colonial Treasurer, and the actual administration of the railways was entrusted to three Commissioners, to whom were given very extensive powers, amounting in fact to almost independent control. The change was made with the view of securing economic management of the lines, free from political interference.

PRIVATE RAILWAY LINES.

In the Colony of New South Wales the established policy has hitherto been to keep the railways under State management and

Deniliquin to Moama line.

Silverton and Broken Hill line.

control, and this policy has been departed from in two instances only, with the exception of short lines to connect coal-mines with the main railways, &c. The Parliament granted permission to a company to construct a line from Deniliquin, in the centre of the Riverina district, to Moama, on the Murray, where it meets the railway system of Victoria. A considerable proportion of the wool and other produce of Riverina reaches the Melbourne market by this route. The line is 45 miles in length, and was constructed under a special Act of Parliament, assented to on the 3rd March, 1874. The land required was granted by the New South Wales Government, right being reserved for the purchase of the line at any time after twenty-one years from the passing of the Act. The capital of the Company is £125,000, of which £100,000 has been called up, while £40,000 was raised by debentures. The dividends formerly paid averaged 10 per cent., but for 1891-92 the rate paid was only 7 per cent. During the year 1888 a line, 35 miles 54 chains in length, was laid down from the Barrier silver mines, Silverton, and Broken Hill to the South Australian Border. The capital of the Company is £1,000,000, of which £164,839 has been called up, and £85,000 raised by debentures. The line, since its inception, has had large support; the dividends paid have amounted to 50 per cent. of the capital subscribed, and in 1891 the large dividend of 70 per cent. was declared. In June, 1892, however, owing to the labor troubles in the district, the dividend had declined to 50 per cent. The following table shows the operations of these lines during the year 1891:—

Name of Line.	Date of Opening.	Length of Line.	Total Expended on Construction.	Passengers Carried.	Goods Carried.	Train Miles Run.	Rolling Stock		
							Locomotives.	Passenger Carriages.	Goods Carriages & Vans.
		m. c.	£	No.	Tons.		No.	No.	No.
Deniliquin-Moama..	4 July, 1876	45 0	162,672	16,504	26,164	63,280	4	6	[illegible]
Silverton	13 Jan., 1888	35 54	262,297	78,362	415,156	183,909	12	15	[illegible]

RAILWAY ACCIDENTS.

Comparative freedom from accident.

The railways of the Colony have been as free from accidents of a serious character as the lines of most other countries. In order to obtain a common basis of comparison it is usual to find the proportion which the number of persons killed or injured bears to the total passengers carried. There is, however, no necessary connection between the two, for it is obvious that accidents may occur on lines chiefly devoted to goods traffic, and a more reasonable basis would be the accidents to passengers only compared with the number of passengers carried. The data from which such a comparison could be made are wanting for most countries; the following figures, therefore, show the number of all descriptions, including not only passengers and employés, but trespassers, killed or injured on the lines of the most important countries, compared with the total number of passengers carried, compiled from various authorities, and up to the latest available dates :—

Countries.	Average per million passengers carried.	
	Killed.	Injured.
Germany	1·7	6·3
Austria-Hungary	4·2	10·7
Belgium	2·0	10·2
Denmark	1·3	6·0
France	1·7	3·1
Italy	2·3	21·5
Norway	0·8	1·3
Holland	2·2	1·9
Roumania	11·0	27·0
Russia	12·1	18·9
New Zealand	2·5	4·3
United Kingdom	1·3	5·4
Portugal	3·4	9·3
Average, United States	1·5	6·1
,, Canada*	17·2	64·8
,, India	6·0	10·4
,, New South Wales*	2·7	9·0
,, Victoria*	1·0	4·8
,, South Australia*	1·7	3·7
,, New Zealand	2·9	45·5

* Average of series of years as in the following table.

Colony's average satisfactory.

It will be seen that New South Wales stands on a level with the average of the principal European countries. If, however, the more legitimate comparison be made of the proportion of casualties amongst passengers only, fewer countries are available for reference. These are given in the following table :—

Years over which figures extend.	Countries.	Average per Million Passengers carried.	
		Killed.	Injured.
1886–90	United Kingdom	0·2	1·8
1887	Russia	0·5	2·4
1886–90	Belgium....................	0·1	1·2
1886–88	France	0·2	0·7
1890	Canada	3·1	12·6
1886–90	Germany	0·1	0·4
1889–92	New South Wales	0·5	2·7
1888–91	Victoria	0·1	1·8
1890–91	South Australia	0·2	0·6
1891–92	New Zealand............	0·7	2·3

Safety of Australian lines.

The foregoing statements show that some of the Australian lines are as safe as those of most other countries, the percentage killed being a little higher than that of the United Kingdom. This mode of comparison is, however, not a perfect one, as the question of the distance travelled by each passenger is an important element of the risk run, and is omitted from consideration. If this were made a factor of the comparative statement it would probably be found that the risk of each traveller by rail would show less variation in the different countries than would seem to be the case from the figures just given.

Classification of casualties.

The persons meeting with accidents on railway lines may be grouped under three heads—passengers, servants of the railways, and trespassers; and the accidents themselves may be classified into those arising from causes beyond the control of the person injured, and those due to misconduct or want of caution. Adopting these classifications the accidents during the year ended on June 30, 1892, were:—

Accidents arising.	Passengers.		Railway Employés		Trespassers, &c.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
From causes beyond their control	9	20	2	29	...	...	11	49
Through misconduct or want of caution.	8	38	24	134	7	7	39	179
Total.....	17	58	26	163	7	7	50	228

Railway accidents.

It will be noticed that, of the 50 persons killed, 7 were trespassers, or persons who had no business to be on the railway at all. Of the remaining fatal cases 17 were passengers, 4 of whom lost their lives through leaving or entering a train in motion, 3 were run over, and the remaining case was that of a man who fell between the train and platform. Of the persons injured 58 were passengers, more than half of whom received injury through their own misconduct or want of caution; 163 railway employés were injured, and in no less than 134 of these cases they were themselves to blame. Three of the trespassers who met with accidents were children.

There were two serious accidents during the year. The first was on the Northern line, near Bluff Rock, on the 26th April, by which one person was killed and three slightly injured. This was a collision between two sections of a train, and arose from a breach of the regulations on the part of the driver of the second portion. The second accident occurred on the following day on the Western line near Tarana, in consequence of the breaking of a rail. Nine deaths resulted from this disaster, and eleven persons were injured.

The verdict of the Coroner's jury at the inquest on the bodies was practically one of "Accidental death," which freed the Department from any legal liability, but compassionate allowances were given, by the consent of the Minister, to those injured, as well as to the representatives of deceased persons in such cases where such allowances were called for.

Accidents in United Kingdom

The returns of the railways of the United Kingdom show that during the year 1890 the total number of persons killed was 1,076 or 1·3 per million passengers carried and 4,721 injured, or 5·8 per million passengers carried; of these, 100 were passengers killed and 865 injured, suicides 77, railway employês killed and injured 499 and 3,122 respectively, the balance being trespassers and persons crossing the line.

In the following statement particulars regarding accidents are given for ten years:—

Year.	Passengers.		Railway Employés.		Trespassers, &c.		Total.	
	Killed.	Injured	Killed.	Injured	Killed.	Injured	Killed.	Injured.
1882	1	28	9	30	12	6	22	64
1883	3	12	8	31	11	5	22	48
1884	5	9	11	20	7	7	23	36
1885	7	44	20	25	14	4	41	73
1886	3	40	12	18	15	5	30	63
1887	10	90	16	17	12	5	38	112
1888-89	3	38	16	27	12	9	31	74
1889-90	6	53	22	103	27	20	55	176
1890-91	7	42	32	114	21	14	60	170
1891-92	17	58	26	163	7	7	50	228
Total	62	414	172	548	138	62	372	934

TRAMWAY AND OMNIBUS TRAFFIC.

Transit Commission.

Within the Metropolis of Sydney the public traffic, with the exception of the tramway system, is controlled by four Transit Commissioners, comprising the Mayor of Sydney, the Inspector-General of Police, a representative elected by the Aldermen of

Suburban Municipalities, and one by the holders of licenses under the Commissioners. The tramways, like the railways, are the property of the Government, and are under the control of the Commissioners for Railways. There are now three distinct systems of tramways in operation, consisting of the Metropolitan lines, 37 miles long; the North Shore cable tramway, 1½ miles; and the Newcastle to Plattsburg line, 7½ miles, giving a total length of 48 miles, including the line from Ashfield to Enfield, 2 miles. The Campbelltown and Camden line, 7½ miles; and the Kogarah and Sandringham line, 5 miles, formerly classed as Tramways, are now included under the head of Railways.

Tramways.

The Metropolitan tramways may be fairly regarded as street railways, and they are worked by locomotives of a special construction. Proposals for the substitution of cables or electric power for the steam motors have been considered, though no definite decision has been arrived at. A cable tramway was inaugurated at North Sydney some years ago, which is now proving a success, returning 4·27 per cent. on the capital expenditure for the year, June, 1892. A contract has been accepted for the construction of a cable tram from the heart of Sydney to the suburb of Woollahra, *via* William-street. The electric system was tried on a short line joining the Waverley and Randwick tram-lines, but proved less economical than steam power, and accordingly was abandoned in April, 1892, in favour of steam.

Metropolitan Tramways.

The net return on Tramway capital has varied greatly from year to year. The favourable results of the first three years encouraged the belief that the metropolitan tramways would prove a source of increase to the general revenue of the Colony. These anticipations have now been realized, and for some three years the net earnings have considerably exceeded the rate of interest paid for the money borrowed for the construction of these works. The following Table gives some interesting particulars respecting the Metropolitan Tramways, exclusive of the North Shore Cable Tramway:—

Interest on capital.

Metropolitan Tramways—Revenue, Expenditure, Capital Invested.

Year.	Length of Line.	Car Mileage.	Total Earnings.	Working Expenses.	Earnings per Car Mile.	Working cost per Car Mile.	Per centage of working cost of gross earnings.	Net Earnings.	Capital invested on Lines open.	Interest on Capital.
			£	£	d.	d.		£	£	per cent.
1879*	1½	13,270	4,416	2,278	79·87	41·19	51·59	2,138	22,269	33·00
1880	4	84,074	18,980	13,444	54·18	38·38	70·83	5,536	60,218	12·34
1881	9½	296,906	62,549	52,107	50·56	42·12	83·31	10,442	169,450	6·16
1882	22	670,649	126,202	103,136	45·16	36·91	81·72	23,066	412,561	6·80
1883	25	1,076,096	190,699	178,877	42·53	39·89	93·80	11,822	544,105	2·22
1884	27½	1,242,491	219,942	215,167	42·48	41·56	97·83	4,775	643,111	0·76
1885	27½	1,220,500	223,340	207,995	43·91	40·90	93·13	15,345	708,109	2·17
1886	27½	1,222,943	226,367	201,737	44·42	39·59	89·12	24,630	742,113	3·32
1887	29½	1,220,026	214,125	201,468	42·12	39·63	94·08	12,657	731,582	1·76
1888‡	29½	1,246,543	221,060	204,227	42·56	39·32	92·38	16,833	742,555	2·27
1889‡	29½	1,338,386	225,833	206,092	40·49	36·95	91·25	19,741	771,255	2·56
1890‡	30½	1,474,646	249,508	207,517	40·60	36·46	83·17	41,991	790,555	5·31
1891‡	33½	1,553,048	270,365	221,505	41·78	34·23	81·92	48,860	857,455	5·74
1892‡	37	1,613,443	279,323	229,145	41·55	34·09	82·04	50,176	932,907	5·54

* The line was opened for three and a half months only in 1879, and for part of this period was worked with horsepower.

‡ Year ending 30th June.

Fare per mile.

The fares paid on the tramways average about 1d. per mile, the lines being divided into sections of about 1 and 2 miles. The number of persons using the tram-cars has not been ascertained with any exactness, as the tickets collected give only a partial indication of the number travelling. It is believed that the fares paid by passengers averages 3d. a journey, so that the number of journeys in the year reached the enormous total of 21,766,000, or about 50 for every person living in the Metropolitan area. Cash fares in lieu of tickets are allowed, although this system does not largely prevail, as an extra fee is charged when money is tendered.

Cost of construction.

The following table shows the cost of Construction of the Metropolitan Steam Tramways to 30th June, 1892 :—

	Length in miles	Total Cost.	Cost per mile.
		£	£
Railway Station to Bridge-street	1¾	94,916	54,237
Liverpool-street to Randwick and Coogee	5¼	112,454	21,419
Darlinghurst Junction to Waverley and Woollahra	4¼	54,706	12,872
Waverley to Bondi Beach	1¾	25,419	14,525
Waverley to Randwick	1½	11,525	7,683
Crown-street Junction to Cleveland-street	¾	16,069	21,425
Railway Station to Glebe and Forest Lodge	2¼	38,021	16,898
Newtown, Glebe Junction to Dulwich Hill	4¼	57,998	13,646
Forest Lodge Junction to Leichhardt and Five Dock	5	54,621	10,924
Railway Station Junction to Botany	6¾	90,640	13,428
Forest Lodge to Balmain	1¾	22,362	12,778
Newtown Bridge to St. Peters	¾	12,336	16,448
Redfern to Moore Park	1	18,446	18,446
Tramway Workshops	...	55,261	...
Rolling Stock	...	252,870	...
Machinery	...	13,150	...
Furniture	...	2,113	...
	37	932,907	25,213

New Tramways.

In the course of the year ended on June 30, 1892, four sections were opened:—Redfern to Moore Park, 1 mile 6 chains; Ashfield to Enfield, 1 mile 79 chains; Railway Bridge, Newtown, to St. Peters, 59 chains; and Forest Lodge to Balmain, 1 mile 58 chains.

Ashfield to Enfield.

The cost of construction and equipment of the Ashfield to Enfield line, which was opened on 23rd September, 1891, was £15,485. The revenue amounted to £950, and the working expenses £1,507, showing a loss of £557 in connection with actual working, without taking interest on capital into consideration. The tram miles run were 18,046; the earnings per tram mile being 12·63d., and expenditure 20·04d.

North Shore Cable line.

The revenue of the North Shore cable line was £11,123, and the expenses £7,902. The net profit therefore was £3,221, or 4·27 per cent. upon £75,368, which was the total cost of the line and its equipment—an increase of 0·60 per cent. upon the previous year. The number of passengers may be approximately set down as 1,185,000, and 73,648 car miles were run.

Newcastle to Plattsburg Tramway.

On the Newcastle to Plattsburg tramway line the gross revenue was £13,696, and the working expenses £10,037, so that the profit for the year came to £3,659. The cost of construction and equipment was £75,899, so that the net return was 4·82 per cent. upon the capital invested, as against 2·18 per cent. last year. The tram miles run were 117,924, and the earnings per tram mile were 27·88d., and expenditure 20·43d.

In the following table are given the revenue, expenditure, and capital invested on all State tramways since their inception in 1879:—

State Tramways.—Revenue, Expenditure, and Capital Invested.

Year.	Total Length of Lines.	Capital Expended.			Value of Fares received.	Total Earnings	Expenditure for Working Expenses.	Net Earnings over Working Expenses.
		On Lines open for Traffic.	On Extensions not opened.	Total.				
	Miles.	£	£	£	£	£	£	£
1879	1½	22,061	....	22,061	4,416	4,416	2,278	2,138
1880	4½	60,218	1,683	61,901	18,968	18,980	13,444	5,536
1881	11¼	181,659	38,659	220,318	61,921	62,549	52,107	10,442
1882	29½	447,939	10,206	458,145	127,124	128,354	120,181	8,173
1883	32½	579,439	104,686	648,125	190,209	193,929	183,218	10,711
1884	35	683,179	106,320	789,499	218,885	223,454	215,086	8,368
1885	35	748,506	142,217	890,723	220,332	227,144	207,898	19,246
1886	36½	854,260	131,342	985,602	230,374	234,143	207,635	26,508
1887	51	917,995	105,640	1,023,635	225,764	229,772	211,722	18,050
1888	*43½	907,987	106,757	1,014,664	241,838	241,838	217,629	24,209
†1889	‡38½	909,595	107,333	1,016,928	243,563	243,563	221,835	21,728
†1890	39½	933,614	87,194	1,020,808	262,835	268,962	224,073	44,889
†1891	42½	1,004,212	35,866	1,040,078	292,499	292,850	239,679	53,171
†1892	48	1,099,659	28,946	1,128,605	304,899	305,090	248,591	56,499

* Camden-Campbelltown line now placed under Railways † Year ending 30th June. ‡ Kogarah and Sans Souci line now placed under Railways.

Wages paid.

During the year ended with June, 1892, the total amount of wages paid by the Tramway Department amounted to £169,365, as against £160,206 in the previous year. Of this sum £35,246 was paid to the Maintenance Branch, £93,778 to the Locomotive Branch, and the Traffic Branch absorbed £40,341.

Number of employés.

The number of men employed was 1,151, as against 1,339 in the previous year. The salaried staff was 43, and 1,108 were on wages. Taking railways and tramways together, the number of persons employed was 11,789, of whom 1,645 were on the salaried staff, and 10,144 were on wages. To the latter the sum of £1,443,759 was paid as wages during the year, being at the rate of £142 6s. 6d. per man employed.

Tramway accidents.

Any statement as to the number of persons injured on the tramways of the city compared with the total number of persons carried, must be taken as approximate, as the latter is not definitely known. A record of the accidents which occurred during the year which ended on the 30th June last shows them to have been 35 in number, of which 5 were fatal, and 30 were cases of injury. There were no fatal accidents to passengers, but there were 14 cases of non-fatal accident. Two servants of the Department were killed and two suffered injury. Seventeen accidents in connection with trams occurred to persons who were neither passengers nor employés, 3 of which were fatal, and 14 non-fatal. Eight of the casualties arose from persons entering or leaving a tram in motion, and 11 accidents occurred to children. The number of passengers carried on the tramways probably exceeds 23,000,000, which would give the rate of fatal accidents 0·2 per million, and non-fatal accidents 0·6 per million. This must be considered a very light average, seeing that the tramways for a great part of their course traverse crowded streets.

PRIVATE TRAMWAYS, &c.

Private tramways.

There are two tramways under private control within the Metropolitan area—one branching from the Illawarra Line at

Rockdale and running down to Lady Robinson's Beach, a distance of one mile. This line is chiefly used by excursionists visiting the shores of Botany Bay; it was constructed in 1885, and in 1891 carried 186,803 passengers. The other line passes through the township of Parramatta. The line commences at the Park Gates, continuing as far as the Newington Wharf at Duck River, a distance of three miles, and there connects with the Parramatta River steamers conveying passengers and goods to and from Sydney. This line was laid down in 1883.

North Sydney Tramway.

There is a private line in construction at North Sydney connecting the cable tram terminus on the heights of St. Leonards with the village of Gordon. On this line a magnificent suspension bridge has been built, the only one of its kind in the colony. It is designed in three spans—one of 500 ft., and two end spans each of 150 ft., with an altitude of 180 ft. above water level. The construction of this line is expected to give an impetus to a locality which, although long settled, has progressed but little for lack of speedy communication with the metropolis.

Omnibus traffic.

Besides the tramways the citizens of Sydney are well provided with other means of travelling within the city and suburban limits, as there are numerous omnibus and cab proprietaries. At the head of these stands the Sydney Tramway and Omnibus Company. No tramways are maintained by this company, as its name would imply, but lines of omnibuses have been established by it in all the principal routes of traffic from the city to the suburbs. The plant of this Company consists of 1,000 horses, of which 940 are in work, the remainder, 60, being held in reserve. Their vehicles consist of 127 omnibuses, 19 carriages, and 6 breaks. They have 148 drivers constantly at work, and as many as 158 other employees, including clerks, mechanics, grooms, stablemen, &c. There are also public vehicles belonging to private individuals, or small associations, plying between the city and some of the more distant suburbs, making a total of 275 omnibuses in all.

Cabs and vans.

The number of cabs, carriages, and waggonettes registered and licensed by the Transit Commissioners under the Municipal by-laws amounts to 1,317, in addition to which there are 633 vans and other vehicles; and the public interest is secured against exaggerated demands on the part of licensed cabmen, and other drivers of public vehicles, by a system of fares fixed on a scale liberal to the licensee, whilst not too high for the public to fairly pay. The drivers are placed under the direct control of the Transit Commissioners, who have power to obtain redress from the owners of the vehicles, should any just complaints be made against them. The following shows the number of vehicles of each class licensed during the year 1891 and the number of registered drivers:—

Public vehicles.

Description of Vehicle.	No. of Vehicles.	License Fees.	No. of Drivers, &c.	License Fees.
		£		£
Omnibuses	275	1,353	*502	227
Waggonettes	24	87		
Carriages	2	6	1,482	707
Cabs	1,291	1,858		
Drays and vans	633	593	621	155
Total	2,225	3,897	2,605	1,089

* Includes 21 conductors.

POSTS AND TELEGRAPHS.

Postal and telegraphic communication.

In the matter of postal and telegraphic communication the Colony of New South Wales is liberally provided. Not only is the intercolonial telegraphic system fairly perfect, but the Colony is in direct communication with Europe and the outer world by means of the cables connecting with the various Asiatic continental telegraph lines.

Submarine cable.

A submarine cable also connects the Colony with New Zealand, and has its Australian terminus within sight of the spot where Captain Cook landed on the shores of Botany Bay, and within a stone's throw of the monument erected to the memory of La Pérouse—the unfortunate and gallant emulator of the great English navigator—and the tomb of Père Le Receveur, the botanist attached to his staff.

History of the Postal Department.

First post-office.

First Postal Act.

The history of the Postal Department of New South Wales is interesting as affording a striking illustration of the manner in which very small beginnings have led to great results. For the first twenty-three years of the Colony's existence there were neither regular post-offices nor means of postal communication. The first post-office was established by Governor Macquarie in the year 1810, Mr. Isaac Nichols being appointed Postmaster. The office was in High-street (now known as George-street), at the residence of Mr. Nichols, who was, "in consideration of the trouble and expense attendant upon this duty," allowed to charge on delivery to parties addressed, 8d. for every English or foreign letter of whatever weight, and for every parcel weighing not more than 20 lbs., 1s. 6d.; but exceeding that weight, 3s. The charge on Colonial letters was 4d., irrespective of weight; and soldiers' letters, or those addressed to their wives, were charged 1d. Very little improvement in regard to postal matters took place for some years. In 1825 an Act was passed by Sir Thomas Brisbane, with the advice of the Council, "to regulate the postage of letters in New South Wales," giving power for the establishment of post-offices, and to fix the rates of postage. A proclamation was subsequently issued, fixing the rates of postage and the salaries and allowances of the postmasters; and at the same time persons were invited to tender for the conveyance of mails between Sydney and Parramatta, Windsor and Liverpool, and

Early postage rates.

Franking.

Sir Richard Bourke's Postal Act.

Stamped covers.

between Liverpool and Campbelltown, and from Parramatta to Emu Plains, and thence to Bathurst. It was, however, not until 1828 that the provisions of the Act were put into full force. The rates of postage appear to have depended upon the distance and the difficulty of transmission. The lowest single inland rate was 3d., and the highest 12d., the postage on a letter increasing according to its weight, the minimum fee being charged on letters not exceeding ¼-ounce. Letters between New South Wales and Van Diemen's Land were charged 3d. each (ship rate), and newspapers 1d. Other ship letters were charged 4d. single rate, and 6d. for any weight in excess. The privilege of franking was allowed to the Governor and a number of the chief public officials, and letters to and from convicts passed free under certain regulations. In 1828 the total amount of salaries paid to the country postmasters was £34 7s. 9d., and the establishment in Sydney consisted of one principal postmaster, one clerk, and one letter-carrier. A letter-carrier was subsequently appointed for Parramatta, and he was authorized to charge the public 1d. on every letter delivered by him, which was his only remuneration. In 1831 a two-penny post was established in Sydney; and in 1835, under Sir Richard Bourke, the Act of 1825 was repealed, and another Act was passed, which fixed the charge on a single letter at 4d. for 15 miles, 5d. for 20 miles, 6d. for 30 miles, and so on up to 1s. for 300 miles. In 1837 a post-office was established in Melbourne, which was then of course a part of New South Wales. Stamps were introduced in the same year in the shape of stamped covers or envelopes, which are believed to have been the first postage stamps ever issued.

Growth of the Sydney Post Office.

The Sydney establishment had grown in the year 1838 until it consisted of one postmaster-general, one accountant, six clerks, six letter-carriers, and one office-keeper, or fifteen persons in all. The revenue for that year was £8,390, and the expenditure was £10,357; there were as many as forty post-offices throughout the Colony, which then included what are now known as Victoria

Reduction of postal rates.

Postage stamps.

and Queensland, besides which, as New Zealand was not a separate Colony until 1841, the only post-office she had—at Korraika—was paid through the New South Wales Government. An overland mail to Adelaide was established in 1847, the postage on a single letter being 1s. 6d. The Postal Act was amended again in 1849, during the government of Sir Charles Fitzroy, when the postage on town letters was fixed at 1d. and the inland letters 2d., while the postage on ship letters was 3d., in addition to the inland rate. The use of postage stamps in the present form was authorized, and the privilege of franking was abolished, petitions to the Queen, the Governor, and the Executive and Legislative Councils being the only things allowed to pass free through the post.

Progress of the Department.

Railways utilized for postal purposes.

From the time of the discovery of gold in the year 1851 the history of the post-office has been one of progress and improvement. The Postmaster-General was originally a non-political officer, as the Registrar-General and the Auditor-General are at present. In the year 1855—the first for which an annual report was laid before Parliament—there were in the Colony altogether 155 post offices. The head office was in George-street, on the same site as the present edifice, but the structure was small and inconvenient, notwithstanding its doric columns and pediment in front. There were no electric telegraphs in the Colony at that time, and the arrivals of vessels at the Heads were signalled to the Observatory by means of flags and semaphores. It was in September, 1855, that the first railway was opened in New South Wales, and prior to that time the Southern and Western mails used to leave the General Post Office in old-fashioned mail coaches every evening. During that year the total number of miles travelled by the postal contractors, by coach and on horseback, was 1,023,255 miles. The number of letters passing through the Post Office was 2,114,179, of which 617,041 are described as "foreign," or, in other words, were addressed to places beyond the Colony. The number of newspapers was 2,100,989, of which 1,281,613 were inland, and 819,376 were "foreign." Book parcels and packets were not

Revenue in 1855.

reckoned separately, but were counted as letters. Ten petitions to the Governor or the Council were conveyed free during the year. The revenue of the Department for 1855 was £24,902, and the expenditure was £60,221, while the staff numbered 223 persons in all, of whom 56 were attached to the office in Sydney. The annual report states, with something akin to pride, that the communication with Victoria was not less than three times a week.

Iron pillar-receivers.

Ocean mail contracts.

Post-office in 1891.

The first iron pillar letter-receivers in Sydney were erected in 1856. During the same year 22 miles of railway were utilized for postal purposes, and 16½ miles were added in the following year. The number of letters delivered in Sydney in 1856 was 1,336,032, and 1,481,416 in the country, being an average of about 10½ to every person in the community. There were 86,914 registered letters in 1857, and 7,873 oz. of gold were sent through the post that year, as against 23,712 oz. in the previous year. The postal revenue in the year 1857 amounted to £35,716, of which £34,031 was derived from the sale of stamps. The expenditure amounted to £63,865, out of which sum the conveyance of mails in the Colony absorbed £41,324, without reckoning £20,000 towards the subsidy for the conveyance of English mails. In his Report for 1857 the Postmaster-General is obliged to admit that the mail contract for the conveyance of mails between the Australasian Colonies and the United Kingdom had proved "an utter failure, so far as the stipulated time-table might be taken as a criterion." Only 10 monthly mail-steamers arrived that year, and only 11 were despatched, and but 1 steamer out of the 10 arrived to contract time. The time allowed was 58 days from Southampton to Sydney, and 56 days from Sydney to Southampton. In 1891 there were 1,384 post-offices in the Colony, besides 344 receiving offices, and the staff in connection with the Postal Department numbered 3,049 persons, exclusive of mail contractors. The postal lines for that year extended over 31,257 miles, on which the mails were conveyed 2,273 miles by rail and tram, 812 miles by steamer, 16,370 miles by coach, and 11,802 miles on horseback. The number of miles actually travelled by the mails was 8,235,000, being an increase of 772,000 over the mileage of the previous year.

Increase of postal business.

But while the number of miles travelled by the mails in 1891 was over 8 times the number of miles travelled in 1855, the number of letters posted during the same period had increased 28 times, and the number of newspapers over 19 times. In 1891 the number of letters was 63,344,900, of which 59,587,800 were posted within the Colony, or 52 per head for every individual of the population. The number of newspapers posted in the Colony during that year was 40,031,000, or 35 per head. Packets numbered 10,698,300, or about 9 per head, while in 1858, the first year in which they were enumerated separately, there were only 68,564 packets and parcels. Postal cards were first introduced in 1876, when the number sent was 128,786; in 1891 no less than 808,700 were posted within the Colony.

Improved ocean mail service.

Equally marvellous progress has been made in regard to the means of postal communication with the United Kingdom and the continents of Europe and America. Instead of the unsatisfactory ocean mail service of 1857, which nominally brought monthly mails, with news 58 days old, there are now four great lines of ocean steam-ships, which bring mails *via* the Suez Canal at least once a week, the time occupied in the conveyance of the mails averaging 34 to 35 days. In addition, there is another mail service *via* San Francisco, which averages 40 days in transit from London to Sydney, and 38 days on the return trip, and arrives and departs monthly. Regular steam communication with England was first established in 1852. Prior to that time the Colony had to depend upon the irregular arrival and despatch of sailing vessels, but in that year the steamships "Australia," "Chusan," and "Great Britain" were despatched from England, making the voyage in 60 days, causing a strong desire in the minds of the Colonists for a more frequent and steady system of communication with the Old World. The outbreak of the Crimean War in 1854 hindered for a while the accomplishment of this

First mail steamer.

object, but in 1856 a line of steamers was again laid on, and the service was carried on by the Peninsular and Oriental Company and the Royal Mail Company for some years, without giving so much satisfaction to the public as might have been expected.

The Panama line.

As far back as 1854 a proposal was made for the establishment of a line of mail packets *via* Panama, and negotiations on the subject were carried on for several years between the Government of the United Kingdom and those of New South Wales and New Zealand. The result was that in 1866 the line was started, and continued in operation until the end of 1868, when it was terminated through the failure of the company by which it had been carried out. In the following year this Colony, in conjunction with New Zealand, inaugurated a mail service *via* San Francisco, which, with a few interruptions and under various conditions, has been continued up to the present time. The contract expired in November, 1890, and has not been renewed, although the service is still maintained, without any subsidy as far as New South Wales is concerned.

San Francisco route.

Mail service *via* Suez.

The establishment of a mail route *via* America had the effect of stimulating the steamship owners who were engaged in the service *via* Suez, and from that time there was a marked improvement in the steamers laid on, as well as in the punctuality and speed with which the mails were delivered. The Peninsular and Oriental Company have carried mails for the colonies almost from the inception of the ocean steam service until now, with very few interruptions. Towards the end of 1878 the Orient Company commenced carrying mails between Australia and the United Kingdom, and has continued to do so ever since. More recently the fine steamers of the Messageries Maritimes of France and the North German Lloyd's have entered the service, so that there are now one or two mails received and despatched every week, and a voyage to Europe, which was formerly a formidable undertaking, involving great loss of time and much discomfort, is regarded as a mere pleasure trip to fill up a holiday.

French and German steamers.

Federal Ocean Mail Service.

The amount paid by each contributing Colony, on the basis of population, towards the cost of the Federal Ocean Mail Service, for the year 1891, was as follows, viz. :—

	£	s.	d.
New South Wales	26,675	1	10
Victoria	26,382	15	6
Queensland	9,705	19	9
South Australia	7,579	10	10
Tasmania	3,595	15	4
Western Australia	1,060	16	9
Total	£75,000	0	0

The contribution from the United Kingdom is £95,000.

South Sea Island mails.

A subsidy of £1,200 per annum is paid to the A.U.S.N. Co. for the transport of mails between Sydney and New Caledonia, New Hebrides, Sandwich Island, and Fiji. The same company also provides a monthly service between the principal Islands of the New Hebrides Group, for which a subsidy of £1,000 was voted in 1891.

New Post-office building.

In the year 1865 the office of Postmaster-General was made a political one, at first without, and subsequently with, a seat in the Cabinet. The old Post-office building in George-street was found so small and inconvenient that it was resolved to build a larger and more commodious edifice on the same site, and in 1863 the business of the department was removed to a temporary wooden building in Wynyard-square. It was not until 1873 that the new building was partly finished so that the officers could remove from the crowded and ill-ventilated structure in Wynyard-square, where they had carried on their business under great disadvantages and difficulties, to the present palatial structure, which is in every respect a credit to the Colony. The head quarters of the Electric Telegraph Department, the Money Order Office, and the Post-office Savings Bank are in the same building, so that the Postmaster-General has around him all the various branches over which he presides. The following return shows the operations of the Post-office in five-year periods from 1855 to 1885, and annually since that date to the end of 1891 :—

Number of Offices, Employés, Income, Expenditure, &c., of the New South Wales Post Office.

Year.	Number of—			Extent of Postal Lines.				Miles actually travelled.	Cost of conveyance of mails, Foreign and Inland.	Income.	Approximate expenditure.
	Post Offices.	Receiving Offices.	Persons employed.	Railway, Tramway, & Steamer.	Coach.	Horse.	Total.				
				Miles.	Miles.	Miles.	Miles.		£	£	£
1855	155	8	223	*	*	*	*	1,023,255	45,412	24,902	60,221
1860	289	*	289	60½	1,757½	6,413	8,231	1,461,518	44,303	45,613	71,391
1865	435	*	513	140¾	2,528	9,323	11,992	2,521,212	49,840	70,985	83,659
1870	562	*	690	339	3,865	10,038	14,242	3,062,458	48,649	84,441	86,722
1875	752	7	967	435	5,407	11,829	17,671	3,787,757	138,912	107,761	196,368
1880	927	119	1,536	891	8,717	12,819	22,427	5,246,373	174,238	194,084	268,128
1885	1,115	202	2,155	1,797	11,736	13,150	26,683	6,621,996	226,105	316,172	375,965
1886	1,157	217	2,307	1,948	12,540	12,606	27,094	6,891,200	233,723	330,591	396,710
1887	1,167	263	2,363	2,074	13,305	12,135	27,514	7,015,600	264,886	342,094	426,587
1888	1,203	288	2,501	2,219	14,411	11,530	28,160	7,144,500	248,403	368,956	415,392
1889	1,261	305	2,650	2,263	14,914	11,541	28,718	7,299,400	212,725	395,584	393,609
1890	1,338	325	2,861	2,273	15,774	11,547	29,594	7,463,000	231,467	427,330	435,395
1891	1,384	344	3,049	3,085	16,370	11,802	31,257	8,235,000	207,357	444,877	424,378

* Not recorded.

Cost of the Postal Department.

It will be noticed that prior to 1889 the Postal Department had been carried on at a considerable annual loss to the State. This is due in a great measure to the wide area over which the population of the country is scattered, which necessitates a proportionately large expenditure for the carriage of mails; and also to the fact that newspapers, which form the bulk of the mail matter, are carried free. But it has always been held that the safe and regular despatch and delivery of the mails is an item of too much importance in the political, commercial, and social life of the Colony to be neglected, even though it should entail a charge of some thousands of pounds annually upon the general revenue. For some years past the difference between the income and the expenditure has been gradually diminishing, until, as the previous table shows, in 1889 for the first time, the income received exceeded the approximate expenditure, the excess amounting to £1,978. In 1890 there was, however, again an excess of expenditure of £8,065; but in 1891 the revenue exceeded the expenditure by £19,500. The revenue for the year 1891 was derived mainly from the sale of postage stamps, which brought in the sum of £454,887. Some of these stamps, however, were used as duty stamps, and consequently cannot properly be taken into the Post-office accounts. It has therefore been found necessary to deduct £24,000 as the approximate value of stamps used for other than postal purposes. Fees for private boxes and private bags came to £7,734; the collections from the other colonies were £5,010, and the total was made up with miscellaneous receipts, £247.

Postal revenue.

Postal expenditure.

An analysis of the items of expenditure shows that the salaries chargeable to the Postal Department amounted to £165,662; the conveyance of mails cost £207,375; and the sum of £51,341 was set down for contingencies. The average cost per mile of the inland mail conveyance for the year was about $4\frac{3}{10}$d., as against $5\frac{1}{2}$d. in 1890.

The following return will give an idea of the magnitude of the work done by the Post-office of New South Wales :—

Letters, Newspapers, &c., passing through the Post Office of New South Wales.

Year.	Number of Letters.		Number of Newspapers.		Packets & Book Parcels.		Total.			
	Beyond the Colony.	Inland and town.	Beyond the Colony.	Inland.	Beyond the Colony	Inland.	Letters.	Newspapers.	Packets, &c.	Postal Cards.
1855	617,041	1,497,138	819,376	1,281,613	†......	†.........	2,114,179	2,100,989	†......	......
1860	868,746	3,362,015	910,478	2,758,305	12,196	71,540	4,230,761	3,668,783	83,736	......
1865	1,106,045	5,222,308	1,028,954	3,660,904	28,852	221,052	6,328,353	4,689,858	249,904	......
1870	1,103,200	5,980,300	1,206,600	2,608,100	36,700	121,000	7,083,500	3,814,700	157,700	......
1875	1,719,100	11,998,800	1,385,900	4,876,700	82,300	274,700	13,717,900	6,262,600	357,000	......
1880	2,776,000	18,956,500	2,381,200	11,409,800	146,600	565,000	21,732,500	13,791,800	711,600	153,360
1885	5,328,200	34,023,000	3,987,900	21,579,500	552,600	2,894,200	39,351,200	25,567,400	3,446,800	341,000
1886	5,582,700	37,267,200	4,276,300	*25,256,100	865,800	3,983,000	42,849,900	*29,532,400	4,848,800	348,700
1887	5,624,000	39,221,900	4,744,400	*29,437,200	980,800	4,549,900	44,845,900	*34,181,600	5,530,700	442,100
1888	6,202,800	42,783,200	5,255,000	28,500,400	1,041,600	5,560,300	48,986,000	33,755,400	6,601,900	520,920
1889	6,346,700	47,624,600	5,599,000	30,931,800	1,305,000	6,564,400	53,971,300	36,530,800	7,869,400	630,100
1890	8,109,300	49,598,600	6,949,900	33,647,300	2,214,300	6,725,300	57,707,900	40,597,200	8,939,600	677,400
1891	9,145,600	54,199,300	7,233,400	35,284,000	2,902,100	8,166,500	63,344,900	42,517,400	11,068,600	808,700

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* These figures are supplied by the newspaper proprietors, and it is believed that the numbers given for these years are somewhat in excess of the truth.

† Included with letters.

Postage rates.

The charge on letters between the Australasian Colonies and the United Kingdom, which had for a long period been at the rate of 6d. per half-ounce *via* Italy, and 4d. by the long sea route, was reduced in 1891 to 2½d. The effect of this reduction on the amount of mail matter carried, and the revenue derived therefrom, is estimated as follows :—

Year.	No. of Letters.	Amount of Postage.
		£
1890	589,540	21,841
1891	756,140	11,814

It will thus be seen that the number of letters has increased about 28 per cent., and that the revenue has fallen about 46 per cent. By an arrangement made at the Postal Congress held at Vienna in the middle of the year, New South Wales, as well as the rest of the colonies of Australasia, entered the Universal Postal Union on the 1st October, 1891. The effect of this will be to extend the reduced rate to all countries embraced in the Union. A common scale of postage on newspapers has been adopted by New South Wales, Victoria, and South Australia, and it is considered probable that before long the remaining colonies of the group will join in the arrangement. This agreement provides that newspapers to the United Kingdom shall be subject to the charge of 1d., irrespective of weight, and to all places beyond Australasia the same rate shall be charged for every four ounces, with an additional half-penny for every two ounces beyond that weight. By a recent change in the Postal Laws of Queensland, newspapers, if not more than seven days old, which previously were transmitted from New South Wales to that Colony free of charge, were subjected to a charge of 1d. for every 10 ounces on delivery in Queensland, unless prepaid at the rate of ½d. for every 10 ounces in the county of origin. This regulation came into force, as far as newspapers posted in New South Wales for delivery in Queensland are concerned, on the 1st January, 1892. A similar charge is now enforced by all the colonies on papers posted in New South Wales.

Rates for newspapers.

Registered letters.

The following figures show the number of registered letters passing through the Post Office in each of the last 10 years:—

1882	254,377
1883	272,887
1884	321,447
1885	354,912
1886	388,573
1887	419,388
1888	555,207
1889	646,151
1890	780,202
1891	1,047,080

Horse-racing sweeps.

This great increase in the number of registered letters is not a natural growth, but arises largely from correspondence relating to the so-called "consultations," or lottery-sweeps connected with horse-racing. Probably 600,000 registered letters in 1891 were associated with these sweeps. The Government propose to deal with this evil in an amending Postal Bill, now before Parliament.

Comparison with other Provinces.

Compared with the other provinces of Australasia and with the United Kingdom, New South Wales occupies a favourable position as regards the number of letters and newspapers inland and from and to places beyond each colony per head of population, as may be seen from the following table:—

Country.	Number per head of population.	
	Letters and postcards.	Newspapers and packets.
New South Wales	51	34
Victoria	56	27
Queensland	38	36
South Australia	55	31
Western Australia	63	39
Tasmania	39	45
New Zealand	42	21
Australasia	50	34
United Kingdom	51	17
England and Wales	57	18
Scotland	41	15
Ireland	24	9

LETTERS CARRIED
POST-CARDS INCLUDED

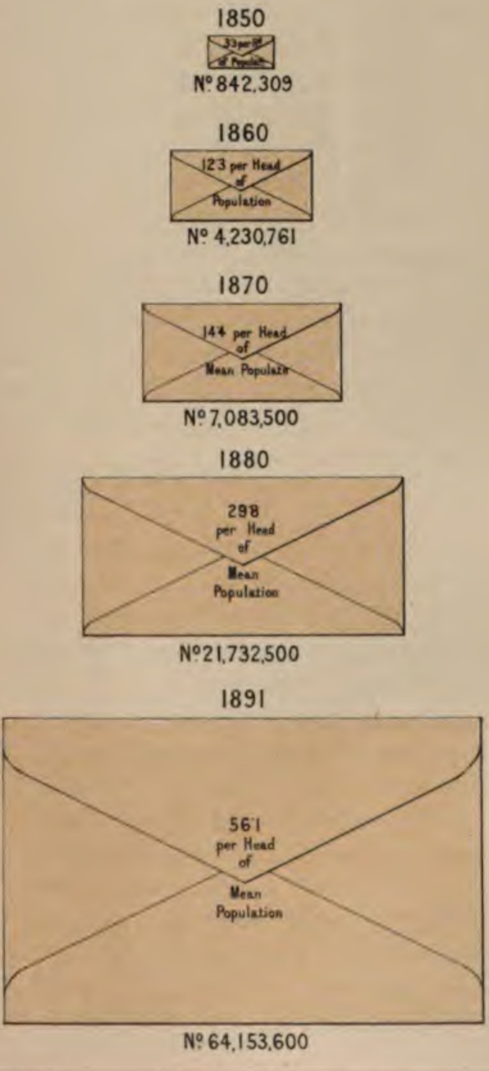

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PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

MONEY ORDERS AND SAVINGS BANKS.

Money order system.

The money order system was brought into operation in this Colony in January, 1863, when nineteen offices were opened—the head office in Sydney, and eighteen branch offices in various parts of the Colony. In June of the same year the operation of the system was extended to the United Kingdom, and all the Australasian Colonies with the exception of Tasmania, and the number of offices in the Colony was increased to forty-seven. The Colony of Tasmania came into the arrangement in 1865, and the Department has continued steadily to progress. In 1891 there were 569 Money Order Offices in the Colony, twenty-five new offices having been established and three abolished during the year. Details respecting the business transacted by the Department will be found in the chapter devoted to "Accumulation."

Post-office Savings Banks.

The Post-office Savings Bank, which is also under the control of the Postmaster-General, was established in the year 1871 at the General Post Office, Sydney, with branches at the principal country towns. The growth of this branch of the service has fully kept pace with those already mentioned. In 1891 there were 415 Post-office Savings Banks in various parts of the Colony—an increase of nineteen over the number in the previous year. During the year 39,199 new accounts were opened, and 27,991 accounts were closed. The number of accounts remaining open at the close of the year was 94,520. The number of deposits received was 265,659, and the amount was £1,509,377, being an increase of 42,231 in the number, and of £311,083 in the amount, as compared with the business of the previous year. The sum of £72,280 was added to depositors' accounts for interest. The balance to the credit of depositors at the end of the year was £2,153,463. The average amount of each deposit was £5 13s. 7¼d., and the average balance at the credit of each depositor was £22 15s. 7¾d. Further information respecting the Post-office Savings Banks will be found in the chapter on "Accumulation."

TELEGRAPHS.

Electric telegraphs.

The electric telegraph was first opened to the public of New South Wales on 26th January, 1858, when the line from Sydney to Liverpool, 22 miles in length, was instituted. From this small beginning the system has increased until in 1891 there were 674 stations in the Colony, and 11,697 miles of line open, carrying 24,780 miles of wire in actual use. The number of miles of line under construction was 174, and the length of line was 923 miles. The following table gives a view of the business of the Electric Telegraph Department, from 1865 to 1891:—

Year.	No. of Stations.	Telegrams transmitted.		Revenue received.	No. of miles of Wire.	Cost of construction.
		Number.	Amount.			
			£	£		£
1865	55	138,785	31,362	29,769	2,989	145,446
1870	86	173,812	32,038	28,550	5,247	195,545
1875	137	719,745	69,193	48,657	8,012	253,391
1880	289	1,319,537	123,172	84,110	13,188	462,226
1885	404	2,625,992	191,192	155,074	19,864	641,669
1886	425	2,661,126	184,053	158,128	20,797	666,028
1887	434	2,876,504	187,858	164,511	21,444	684,600
1888	460	3,410,407	213,869	185,965	22,219	704,912
1889	485	3,433,562	213,776	186,862	22,606	713,663
1890	628	3,592,519	222,307	193,707	23,598	743,698
1891	674	3,578,807	222,363	*198,531	24,780	767,872

* Includes £16,579 revenue from telephones.

Number of telegrams.

The number of telegrams received and despatched during the year amounted to 4,046,251, or about 3½ per head for every individual of the population.

Construction in various countries.

The state of telegraphic construction in the principal countries of the world at the latest available dates is given herewith. The figures are interesting, though the circumstances of Australasia and the older countries are so dissimilar as to make comparison between them more curious than valuable :—

Country.	Length in Miles—		Country.	Length in Miles—	
	Of Lines.	Of Wires.		Of Lines.	Of Wires.
Australasia	44,467	89,057	India, British.. ...	33,462	96,654
Argentine Republic	19,000	28,550	Italy	22,523	83,403
Austro-Hungary ..	39,354	117,087	Japan	6,596	......
Belgium..	4,265	20,315	Mexico	27,861	46,000
Brazil................	6,700	11,556	Netherlands	3,186	11,176
Canada	29,439	62,020	Portugal	3,191	7,420
Cape Colony	4,640	11,791	Russia...............	74,276	171,663
Chili	13,730	......	Spain	14,710	33,552
Denmark	2,794	7,593	Sweden & Norway	10,166	23,234
France	60,910	184,131	Switzerland	4,441	11,099
Germany	62,007	218,096	Turkey	15,000	28,000
Great Britain and Ireland..........	31,440	190,027	United States of America	183,917	678,997
Greece	4,382	5,082			

Cable rates.

At a Conference of the Postal and Telegraph authorities held in Sydney in February, 1891, the question of the cable rates came under discussion, and a proposal of the Eastern Extension Telegraph Company was agreed to by which the colonies of New South Wales, Victoria, South Australia, Western Australia, and Tasmania undertook to make good half the loss which the Company would sustain by a reduction in the schedule of cable charges. The amended cable rates came into force in May, 1891, and the amount to be guaranteed to the Company for the portion of the year during which the contract was in existence was

£158,491. The sum earned by the Company for the same period was £120,141, and the deficiency on the eight months' business was therefore £38,350, one-half of which was made good by the contributing colonies *pro rata* according to their population.

Number of cable messages.

The number of cable messages sent from New South Wales during the eight months, from May to December, 1891, was 11,236, valued at £27,651, while for the corresponding period of 1890 the number of messages was 7,124, and the value £33,164, so that there was an increase of 4,112 messages, and a decrease in the value of £5,513.

TELEPHONES.

Telephones.

The total number of telephones in use in the Colony on the 31st December, 1891, was 2,789, 2,210 being in Sydney and suburbs, and 579 in the country. The length of wire used in transmission of messages cannot be given, as the telegraph wires are largely used for telephones also. Some particulars regarding telephones in Australasian colonies will be found in the following table :—

Colony.	Number of Telephones.	Miles of Wire (distinct from Telegraph Wires).	Revenue.
			£
New South Wales	2,789	*.........	16,579
Victoria	2,439	8,731	38,384
Queensland	639	*.........	*.........
South Australia	758	2,275	12,348
Western Australia	150	591	1,084
Tasmania	689	496	3,528
New Zealand	3,083	2,603	†22,600

* Not furnished. † Approximate.

PART XX.

Finance.

Revenue of New South Wales.

THE Public Revenue of New South Wales largely exceeds that of any other Australasian Colony. The total amount raised by each colony during 1891, the revenue per inhabitant, and the proportion borne by the revenue of each colony to the total revenue of Australasia, were as follows :—

Colony.	Total Revenue.	Revenue per head of population.	Proportion of revenue to total Australasia.
	£	£ s. d.	Per Cent.
New South Wales..........	10,036,185	8 15 6	33·3
Victoria......................	8,343,588	7 7 3	27·7
*Queensland..................	3,473,716	8 9 4	11·5
*South Australia............	2,741,623	8 8 4	9·1
Western Australia.........	497,670	9 15 4	1·7
Tasmania	878,668	5 18 0	2·9
New Zealand	4,182,027	6 12 10	13·8
Australasia	30,153,477	7 16 11	100·0

*Year ending 30 June, 1892.

Revenue for 1825.

Reliable information respecting the revenue and expenditure of New South Wales is not obtainable earlier than 1825, in which year the public receipts amounted to £71,682, and the expenditure to £93,020. Sixty-six years afterwards, at the close of 1891, the revenue had increased more than one hundred and forty fold, though the population had, during the same interval, increased only about thirty-five fold. From 1825 to 1840—a date memorable in the annals of the Colony as that in which transportation ceased—the advance in the revenue was very rapid. In that year the public receipts amounted to £683,112, a sum not again reached until 1853, two years after the discovery of gold. From 1853 to 1859 the revenue made great strides, and amounted to £1,522,668 for the year last mentioned. On the 1st December, 1859, the separation of Queensland took place, and consequently a falling off in the revenue occurred in the following year, the amount collected being £1,308,925. Since 1860 the income of the Colony has increased in a fairly regular manner, as may be seen from the following statement:—

Increase in the revenue.

Year.	Amount.	Year.	Amount.
	£		£
1860	1,308,925	1884	7,117,592
1865	1,771,162	1885	7,587,368
1870	2,102,697	1886	7,594,301
1875	4,126,303	1887	8,582,811
1880	4,911,990	1888	8,886,360
1881	6,714,327	1889	9,063,397
1882	7,418,536	1890	9,494,584
1883	6,470,341	1891	10,036,185

Classification of revenue.

The revenue is usually classified under four heads, Taxation, Land Revenue, Services (including revenue from railways, tramways, water supply, sewerage, posts, telegraphs, and fees of various kinds), and Miscellaneous. The receipts under each class for 1860

Total receipts.

and subsequent years are shown below; the totals will be found in the preceding tables :—

Year.	Taxation.	Land Revenue.	Services.	Miscellaneous.
	£	£	£	£
1860	713,218	312,869	196,527	86,311
1865	823,433	532,028	314,989	100,712
1870	1,045,330	478,070	481,416	97,881
1875	1,122,002	2,020,629	858,497	125,175
1880	1,417,294	1,646,436	1,594,082	254,178
1881	1,770,849	2,820,988	1,945,076	177,414
1882	1,903,412	2,914,394	2,363,085	237,645
1883	1,891,708	1,656,069	2,666,731	255,833
1884	2,152,854	1,753,345	2,942,643	268,750
1885	2,252,651	1,876,452	3,168,463	289,802
1886	2,611,835	1,643,955	3,089,235	249,276
1887	2,664,548	2,378,995	3,245,907	293,361
1888	2,681,883	2,268,253	3,664,100	272,124
1889	2,677,169	2,137,563	3,924,955	323,710
1890	2,748,339	2,243,039	4,174,938	328,268
1891	2,916,344	2,266,636	4,604,918	248,287

Refunds.

The amounts given above, as well as those in the other tables referring to revenue, represent the gross receipts. In every year refunds are made, so that the figures just quoted are somewhat too high, but the amount of the refunds is now much less than formerly.

Revenue per head of the population.

The total revenue of the Colony amounted in 1891 to £8 15s. 6d. per head, which, though nominally a very large sum compared with the revenue of other countries, falls short of the highest amount received in any year, viz., £9 5s. 10d., in 1882, by 10s. 4d. As already pointed out, the Customs duties were increased towards the close of 1891. The full effect of the change is now being realised, and it is expected that the revenue under the present system of taxation will average somewhat more than £9 per inhabitant; and though an increase may be expected in the gross sum obtained under each branch of revenue, it is scarcely probable that the amount received per head will advance beyond the rate just given, especially as the increase in land revenue will not be proportionate to the increase in population.

Revenue per head from various sources.

The amounts received per head of population under each subdivision for the periods shown were :—

Year.	Taxation.	Land Revenue.	Services.	Miscellaneous.	Total Revenue.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1860	2 1 8	0 18 3	0 11 6	0 5 0	3 16 5
1865	2 1 2	1 6 7	0 15 9	0 5 1	4 8 7
1870	2 2 8	0 19 6	0 19 8	0 4 0	4 5 10
1875	1 18 5	3 9 2	1 9 4	0 4 3	7 1 2
1880	1 19 1	2 5 4	2 3 11	0 7 1	6 15 5
1881	2 6 3	3 13 10	2 10 10	0 4 7	8 15 6
1882	2 7 8	3 13 0	2 19 3	0 5 11	9 5 10
1883	2 5 2	1 19 6	3 3 8	0 6 0	7 14 4
1884	2 8 9	1 19 8	3 6 8	0 6 1	8 1 2
1885	2 8 7	2 0 6	3 8 4	0 6 3	8 3 8
1886	2 13 6	1 13 11	3 3 9	0 5 6	7 16 8
1887	2 13 1	2 7 4	3 4 7	0 5 10	8 10 10
1888	2 11 9	2 3 9	3 10 9	0 5 3	8 11 6
1889	2 10 2	2 0 1	3 13 7	0 6 0	8 9 10
1890	2 9 11	2 0 9	3 15 9	0 5 11	8 12 4
1891	2 11 0	1 19 8	4 0 6	0 4 4	8 15 6

Taxation very light.

Though a revenue of £10,036,185 is derived from a population of little more than 1,165,000 the people of New South Wales are comparatively lightly taxed, the amount falling upon each person in the community for the last thirty years averaging only £2 6s., of which amount the bulk is obtained indirectly through the Customs House. From the figures relating to the taxation per head in the table just given, it will be seen that there has been not a little variation from year to year. Referring only to the period from 1881 onward, the chief points to be noted are the imposition of stamp duties and the change in the tariff. The increase in 1881 is due to the first-named cause, from which the sum of about five shillings per head was obtained. In 1886 the customs duties were increased, which accounts for the large advance shown that year. There was a slight decrease during 1887, arising from the repeal of the tariff of the previous year, which took effect on the 1st October, and a still further decline in 1888, 1889, and 1890, due to the same cause. In December, 1891, an entire revision of the tariff was effected, and the number of articles subject to duty was very largely increased.

This is a subject to which considerable space has already been devoted in the chapter on commerce, under the heading of Customs Duties, and further reference here is not needed.

Revenue from taxation.

It has been estimated that the total annual income of the inhabitants of the Colony is approximately £63,000,000. The revenue derived from taxation in 1891 was, as shown below, £2,916,344, equivalent, therefore, to a tax of 4·6 per cent. on the income of each person in the community. Dividing the revenue derived from taxation into the four main divisions of Customs, Excise, Stamps, and Licenses, the amount received under each head during the year 1891 was:—

	£	£
CUSTOMS:—		
Spirits, wine, ale, and beer	1,000,018	
Tobacco and cigars	277,677	
Tea	120,284	
Sugar and molasses	135,041	
Coffee, chicory, opium, rice, dried fruit	114,925	
Other specific duties	472,288	
Ad valorem duties	39,394	
Miscellaneous collections	8,638	
Total, Customs	....	2,168,265
EXCISE:—		
Ale, beer, and porter	131,851	
Duty on spirits distilled in the Colony	23,729	
Duty on tobacco, cigars, and cigarettes	131,353	
Tobacco factory license fees	1,265	
Total, Excise	....	288,198
STAMP DUTIES:—		
Adhesive stamps	17,250	
Impressed stamps	131,612	
Bank-note composition	31,505	
Probate, administration, and settlement duty	96,152	
Miscellaneous receipts	14,260	
Paid direct to Treasury by several Departments	35,999	
Total, Stamp Duties	....	326,778
LICENSES:—		
Retail and fermented spirituous liquors	101,345	
Billiard and bagatelle licenses	9,434	
Wholesale spirit dealers	8,629	
All other licenses	13,695	
Total, Licenses	....	133,103
Total, Taxation	....	£2,916,344

Revenue from Customs and Excise.

Under the heads of Trade and Commerce will be found some particulars of the revenue from Customs as well as that obtained from Excise. The cost of collecting revenue by the Customs Department averages about three per cent., a very moderate sum, when the large area of the Colony and the length of its frontiers are considered. The cost in 1891 was 2·4 per cent. against 3·2 for Victoria, 3·7 for South Australia, and 4·5 for Western Australia. The expenditure per cent. for Tasmania and New Zealand was about 2·4 per cent., the same as that of New South Wales, the small cost no doubt being accounted for by the absence of Border collections.

Stamp Duties.

Stamp Duties during 1891 yielded a revenue of £326,778, or about 5s. 8d. per head, while the cost of collection was very trifling, amounting to £4,819, or about one and a half per cent. of the amount received.

Probate Duty.

In addition to the above, a duty is levied on the value of estates of deceased persons, and on settlements of property taking effect after the death of the testator.

Sale of liquors.

Licenses.

The sale of fermented and spirituous liquors is regulated by Acts 45 Victoria No. 14, and 46 Victoria No. 24. Under the provisions of these Acts five descriptions of licenses are authorized :—

(*a*) Publicans' licenses, for which an annual fee of £30 is payable.

(*b*) Packet licenses—1st class, for vessels over 1,000 tons, £15 ; 2nd class, from 250 to 1,000 tons, £10 ; and 3rd class, for vessels of under 250 tons, with a license fee of £3.

(*c*) Colonial wine licenses, annual fee, £3.

(*d*) Booth or stand licenses, fee £2 ; and

(*e*) Brewers' or spirit merchants' licenses, fee £30 if within, and £20 if outside, the boundaries of the city of Sydney.

There are also billiard and bagatelle licenses, costing £10 per annum, auctioneers' licenses, for which a fee of £15 for general and £2 for district is required, a license for the sale of tobacco and cigars, and various other licenses, from which an amount of revenue is derived.

Revenue from publicans' licenses.

The revenue received during 1891 from the various licenses amounted to £133,103, of which £101,345 was from publicans and similar retailers, £1,480 from colonial wine sellers, and £8,609 from brewers and wholesale spirit merchants. The following is the number of licenses issued during 1891:—

Publicans	3,441
Colonial wine	490
Distillers	1
Brewers	76
Spirit merchants	298
Total	4,306

Amended Licensing Act.

Besides the above, there were 60 licenses for the distillation of brandy, 12 for scientific distillation, and 10 apothecaries' distilling licenses. There were 847 holders of publicans' licenses in the metropolitan district, and 2,594 in the remainder of the Colony; in the former case representing 1 licensed house to every 471 residents, while in the latter the proportion is 1 to every 295 residents. During the past twenty-one years the number of licensed houses has increased from 2,187 to 3,441, although in proportion to population there has been a large decrease. There has been an absolute decrease in the number of houses since 1881, attributable to the operations of the Licensing Act, which came into force in that year. By this Act the granting of licenses was taken out of the hands of the ordinary Bench of Magistrates and entrusted to a Licensing Court, comprising magistrates specially appointed. The alteration in the composition of the Licensing Court led to a stricter scrutiny of applicants and a consequent decrease in the number of licenses granted. The Act has also operated to decrease the number of hotels, by requiring a specified number of rooms for the accommodation of travellers, and, in cases where insufficient accommodation was afforded, not a few hotel-keepers found it better to give up their licenses than to comply with the provisions of the Act. In 1882, the year after the new Act was enforced, the number of licensed houses in the metropolitan area was 940, and in the country districts 2,123; nine years later the numbers were 847 and 2,594 respectively, a decrease equal to 9·9 per cent. in the metropolis, while the increase in the country districts was 22·2 per cent. The following table gives particulars respecting the number of public-houses, and the number of residents to each :—

Year.	Number of Licensed Houses.			Number of Residents in District to each House.		
	Metropolitan.	Extra-Metropolitan.	Total.	Metropolitan.	Extra Metropolitan.	Total.
1870 ...	584	1,603	2,187	230	227	228
1875 ...	656	1,974	2,630	250	218	226
1880 ...	883	2,464	3,347	249	212	222
1885 ...	823	2,356	3,179	346	273	292
1886 ...	840	2,391	3,231	358	280	300
1887 ...	846	2,424	3,270	374	284	317
1888 ...	858	2,510	3,368	389	279	308
1889 ...	856	2,549	3,405	411	280	313
1890 ...	853	2,575	3,428	434	284	321
1891 ...	847	2,594	3,441	471	295	339

REVENUE FROM PUBLIC LANDS.

Land Revenue of the Colony.

The income derived from the Public lands of the Colony has varied very considerably during the past thirty-one years, the lowest amount received being in 1864, when the revenue was only £297,866, or, at the rate of 15s. 6d. per head, while the greatest sum was obtained in 1877, when the receipts amounted to £3,236,277, or at the rate of £5 2s. 11d. per head of the population. Other periods also show great variation, due in the years prior to 1884 to the fluctuation in the amount of land sold at auction, but since the year last-named the Land Revenue has been more steady. The revenue from the public estate, compared with population, will gradually decline, as the amount available for sale or lease is a diminishing quantity, while the population is steadily increasing. The revenue for 1891 amounted to £2,266,636, grouped under the following heads :—

SALES :—	£
Auction sales	146,868
Improved purchases, &c.	24,279
Deposits on conditional purchases	167,629
Instalments on conditional purchases (inclusive of interest)	701,784
Balances on conditional purchases	102,229
Miscellaneous purchases	20,549
Total, Land sales	£1,163,338
Interest on land conditionally purchased (under Act of 1861)..	£107,174
PASTORAL OCCUPATION :—	
Pastoral leases (runs)	402,053
Occupation licenses	185,562
Conditional leases	147,028
Homestead leases	59,880
Annual leases	33,142
Other leases	1,120
Total, Pastoral occupation	£828,785
MINING OCCUPATION :—	
Mineral leases	24,879
Mineral licenses	2,148
Leases of auriferous lands	12,101
Miscellaneous	14,323
Total, Mining occupation	£53,451
MISCELLANEOUS LAND RECEIPTS :—	
Survey fees (under Act of 1889)	76,163
Licenses to cut timber, &c.	16,096
All other receipts	21,629
Total, Miscellaneous Land receipts	£113,888
Total, Land revenue	£2,266,636

Falling off in land revenue.

A very great falling off in the land revenue will be observed from 1883 to 1886. This was due in the first instance to the stoppage of auction sales in 1883, and secondly, to the difficulties encountered in bringing the Crown Lands Act of 1884 into operation. These difficulties were overcome in 1887, and the land revenue may now be said to be in a normal condition.

Revenue derived from sales and occupation.

The revenue derived from the Crown lands may be conveniently divided into two main classes—receipts from sales, and from pastoral, mining, or other occupation. The amounts received under each head are given below for the years from 1872 to 1891, covering a very interesting period of twenty years :—

Year.	Sales.	Occupation, &c.	Total Land Revenue.*	Year.	Sales.	Occupation, &c.	Total Land Revenue.
	£	£	£		£	£	£
1872	436,483	403,970	840,453	1882	2,455,041	459,353	2,914,394
1873	845,410	292,504	1,137,914	1883	1,269,480	386,564	1,656,044
1874	1,163,572	262,594	1,426,166	1884	1,363,483	389,760	1,753,243
1875	1,760,570	260,059	2,020,629	1885	1,314,552	562,011	1,876,563
1876	2,513,404	259,599	2,773,003	1886	1,206,438	437,516	1,643,954
1877	2,967,857	268,420	3,236,277	1887	1,221,775	1,157,219	2,378,994
1878	2,076,004	249,700	2,325,704	1888	1,212,283	1,055,970	2,268,253
1879	1,386,687	245,337	1,632,024	1889	1,149,171	988,392	2,137,563
1880	1,382,026	264,410	1,646,436	1890	1,275,658	967,381	2,243,039
1881	2,483,338	337,651	2,820,989	1891	1,270,512	996,124	2,266,636

Practice of treating proceeds of sales as revenue.

The practice of treating money derived from the sale of Crown lands as revenue obtains in all the Australian Colonies, and the money so raised forms a substantial item of their annual income. In New South Wales the sums realized from this source have been in certain years so considerable as to leave a large surplus when all charges upon the public revenue were defrayed. The revenue derived from the sale of lands may be grouped under three heads :—(*a*) Auction sales and selections after auction;

Auction sales.

(*b*) Improvement and other purchases; and (*c*) Conditional sales. The proceeds of land sold at auction at one time formed a very large item of public income, as the following table, covering a period of twenty years, will show :—

Year.	Auction Sales.	Selections after Auction.	Total.	Year.	Auction Sales.	Selections after Auction.	Total.
	£	£	£		£	£	£
1872	89,129	89,588	178,717	1882	707,594	417,715	1,125,309
1873	300,229	104,496	404,725	1883	178,304	37,480	215,784
1874	553,973	106,042	660,015	1884	95,772	767	96,539
1875	1,019,053	102,440	1,121,493	1885	118,738	......	118,738
1876	1,561,243	98,280	1,659,523	1886	111,083	......	111,083
1877	1,967,057	166,730	2,133,787	1887	172,553	......	172,553
1878	1,061,670	124,197	1,185,867	1888	207,052	......	207,052
1879	698,981	66	699,047	1889	160,695	......	160,695
1880	437,964	42,495	480,459	1890	169,664	......	169,664
1881	566,404	351,885	918,289	1891	146,868	......	146,868

Large alienations at auction.

It will be observed that the alienation of the public estate by means of auction sales and unconditional selections after auction attained its highest point during the years 1875 to 1878. A temporary lull took place in the two following years, but in 1882 the auction sales of Crown lands reached nearly the same proportion as before. It was not until it had become evident that the indiscriminate sale of the public estate was threatening to endanger the vital interests of the country that this form of alienation was stopped. In 1883, auction sales were almost completely suspended, the receipts therefrom immediately falling from £1,125,309 in 1882 to £96,539 in 1884, and £146,868 in 1891.

Limitation of auction sales.

The fact had forced itself upon the attention of the authorities that this wholesale alienation of Crown lands was not due to the demand created by the normal progress of settlement, but was the outcome of an unhealthy rivalry between the two principal classes of settlers—the pastoral tenants, and the free selectors. Besides this, the estate of the country was being parted with without any conditions as to improvements or settlement, and as the great object of land sales was to promote settlement, it was deemed advisable by the Government to temporarily suspend land sales by auction, and ultimately it was decided to sell only a maximum area of 200,000 acres during any one year.

Improvement and pre-emptive purchases.

Another portion of the land revenue is obtained from the sales, without competition, to the legal occupiers, of Crown lands improved to the value of £1 per acre. To this form of alienation may be added purchases of land made by right of pre-emption on a fixed proportion of the total area held under lease in certain cases. Purchases of the latter class ceased after the passing of the Land Act of 1884.

Revenue from improvement purchases and pre-emptive sales.

From these sources (improvement purchases and pre-emptive sales) the following amounts were received into the Colonial Treasury since the year 1875:—

Year.	Improvement Purchases.	Pre-emptive Right Sales.	Total.	Year.	Improvement Purchases.	Pre-emptive Right Sales.	Total.
	£	£	£		£	£	£
1875	......	65,379	65,379	1884	305,455	4,450	309,905
1876	......	189,664	189,664	1885	408,721	....	408,721
1877	133,357	77,263	210,620	1886	260,526	....	260,526
1878	239,944	20,046	259,990	1887	166,117	....	166,117
1879	156,471	4,743	161,214	1888	86,913	....	86,913
1880	245,094	5,799	250,893	1889	43,202	....	43,202
1881	494,262	2,908	497,170	1890	41,827	....	41,827
1882	179,949	1,041	180,990	1891	24,279	....	24,279
1883	117,561	1,345	118,906				

Revenue from conditional sales.

Conditional sales formed the main feature of the Land Act of 1861. From 1862, when these sales commenced, to end of 1891, the area of land applied for amounted to 31,185,521 acres, or equal to 15·9 per cent. of the total area of the Colony, exclusive of water. The total receipts in respect of such land were :—

For deposit	£6,860,473
Balance and instalments of purchase money	6,388,102
Interest	3,164,569
Total	£16,413,144

Total receipts from conditional sales.

The following table shows the gross amounts received on account of conditional sales from the date when the Act came into force to the end of 1891 :—

Year.	Amounts received.				Total.
	Deposits.	Balances.	Instalments.	Interest under Act of 1861.	
	£	£	£	£	£
1862 to 1880	3,928,548	568,607	224,509	1,146,278	5,867,942
1881	592,966	92,009	129,547	253,357	1,067,879
1882	621,617	109,677	129,921	287,526	1,148,741
1883	424,968	58,315	137,278	310,676	931,237
1884	381,550	61,466	183,081	326,184	952,281
1885	121,437	68,139	440,286	151,658	781,520
1886	112,892	74,504	514,162	129,978	831,536
1887	90,520	97,085	561,496	123,091	872,192
1888	102,906	100,980	578,960	113,403	896,249
1889	111,134	105,761	607,205	110,380	934,480
1890	204,306	91,177	649,924	104,864	1,050,271
1891	167,629	102,229	701,784	107,174	1,078,816
Total	6,860,473	1,529,949	4,858,153	3,164,569	16,413,144

Large sums refunded.

The figures in the foregoing table represent the gross amounts paid, but in the case of the deposits large sums were received which were afterwards refunded, as the ground applied for was not open to selection. The area set down as sold conditionally is on this account also greatly overstated, and, moreover, includes the area of selections which became forfeited for non-fulfilment of conditions, or on other grounds. The actual area sold conditionally up to the close of 1891 was 21,325,477 acres, and the area for which title deeds have been issued was 2,084,112, leaving a balance of 19,241,365 acres on which the conditions remain unfulfilled. The amount due to the Treasury on conditional purchases was, at the end of 1891, £13,671,249.

The refunds of deposits paid on land conditionally selected have reached considerable amounts in some years, as will be seen from the following statement:—

Year.	Amount of refunds.	Year.	Amount of refunds.
	£		£
1880	28,256	1886	69,024
1881	72,475	1887	41,986
1882	92,804	1888	35,319
1883	132,092	1889	30,602
1884	134,932	1890	36,512
1885	85,868	1891	46,996

Revenue from pastoral occupation.

Another portion of the annual land revenue of the Colony is derived from rents for pastoral occupation, and mineral and other leases. During 1886 the revenue obtained from this source amounted to only £374,920, as the rents were collected according to the old assessment, but it was estimated that more than £500,000 was due at the close of the year for rents accumulating during the previous eighteen months. By an Act of the Legislature, assented to on the 13th July, 1887, the arrears of rent were made payable over a period of two years, with interest at the rate of 5 per cent. During 1887 the rents were paid on the basis of the new tenure, and a large increase is therefore observable under the head of pastoral leases and occupation licenses. The following table gives the annual revenue from pastoral occupation for stated periods, commencing with 1870:—

Year.	Pastoral Leases.	Occupation Licenses.	Conditional Leases.	Homestead Leases.	Annual Leases and Quit Rents.	Total.
	£	£	£	£	£	£
1870	188,560	....	....	....	22,419	210,979
1875	180,911	....	....	....	40,528	221,439
1880	166,261	....	....	....	56,364	222,625
1885	140,940	294,686	37,136	15,768	16,083	504,613
1886	131,893	153,493	59,588	10,660	19,316	374,920
1887	644,279	329,010	67,974	20,167	18,104	1,079,534
1888	526,447	252,121	87,896	27,266	23,460	917,190
1889	512,481	214,166	101,416	35,888	27,040	890,991
1890	362,049	191,045	138,699	41,463	27,633	760,889
1891	402,053	185,562	147,028	59,880	34,262	828,785

Revenue from mining leases.

The revenue derived from mining occupation has not been large, though somewhat higher since 1884 than previous to that year, a circumstance due chiefly to the increased attention paid to silver-mining. The following table gives the revenue under this head for the last ten years:—

Year.	Amount.	Year.	Amount.
	£		£
1882	20,248	1887	43,961
1883	17,778	1888	95,347
1884	28,080	1889	53,384
1885	31,443	1890	62,794
1886	31,242	1891	53,451

Government is owner of railways, &c.

The Government of New South Wales is the owner of all the railways constructed in the Colony, with the exception of the line between Moama and Deniliquin, and that from Broken Hill to the South Australian border, the former 45 miles long and the latter about 36 miles. It owns, also, the entire telegraphic and telephonic system of the Colony, as well as the Post Office and the Metropolitan Water Supply and Sewerage system. From these, and some other minor sources, the revenue, classed under the head of Services, was obtained. The total amount received for Services during the year 1891, under the different heads, was :—

	£	£
Railway Receipts :—		
Railways	3,138,704	
Tramways	300,579	
Total, Railways		3,439,283
Water and Sewerage :—		
Metropolitan Water Rates	164,464	
Country Towns Water Rates	5,819	
Metropolitan Sewerage Rates	81,356	
Total, Water and Sewerage		251,639
Post Office :—		
Postage	443,656	
Telegraph receipts	178,485	
Telephone receipts	7,214	
Commission on money orders	19,198	
Total, Post Office		648,553
Miscellaneous Services :—		
Public School Fees	....	75,916
Pilotage, harbour and light rates, and fees	....	68,280
Registrar-General	....	36,122
Other Fees and Receipts	....	85,879
Total receipts from Services		£4,605,672

Total revenue from services.

The total revenue derived from Services for periods since 1860 will be found in the following table :—

Year.	Revenue from Services.	Year.	Revenue from Services.
	£		£
1860	183,912	1886	3,089,235
1865	345,757	1887	3,245,907
1870	495,124	1888	3,664,100
1875	858,497	1889	3,924,955
1880	1,594,082	1890	4,174,938
1885	3,168,463	1891	4,605,672

The figures just given should be read with the rates per inhabitant stated for the same years which will be found on page 632. The income derived by the Government of the country from services has, with little interruption, increased year by year; this, however, is only what would naturally be expected in a rapidly growing community, but it is satisfactory to be able to record that the income compared with population has also increased.

Thus on referring to the page just quoted it will be seen that the rate per head in 1891 was £4 0s. 6d.; in 1885, £3 8s. 4d.; in 1880, £2 3s. 11d., and so on as far back as 1860, when the small sum of 11s. 6d. per head was obtained. This progressive increase is undoubtedly largely due to the strong impetus the construction of railways, from which three-fourths of the revenue from services are derived, has given to the general production of the country, but it would be unreasonable to expect that such a rate of increase will long continue. Compared with population the value of the production of the Colony is enormous, but as much of this production is due to the largeness of the territory, and not directly to the labours of those who occupy it, its value will, under present conditions, cease to increase at the same rate as population does, and as the revenue from services naturally depends upon the amount of production, it will not only cease to increase at its present rate, but will ultimately decline.

Effect of railway construction.

The questions of railway and tramway earnings and expenditure are dealt with exhaustively in another part of this volume; it will not therefore be needful to discuss these matters at length in this chapter.

Railway and tramway earnings.

The Metropolitan Water Supply and Sewerage are the only services, besides that of Tramways, at present yielding a profit to the Government after all liabilities as to maintenance, management, and interest on capital expenditure have been met. The Water Supply service was placed under the control of the Board in May, 1888, and the Sewerage in September, 1889. The total revenue of these services for 1891, as shown by the accounts of the Board, was £247,134, and the expenditure, including interest on capital cost of construction, was £226,060, leaving a net profit of £21,074.

Water supply and sewerage.

The receipts from the Post and Telegraph services of the Colony have increased substantially year by year, but so also has the expenditure. Although the sum of £648,553 was obtained during 1891 from this source, the expenditure amounted to £694,634,

Revenue from Posts and Telegraphs.

showing a loss on the year's transactions of £46,081, in addition to the amount of interest payable on the debt incurred for these works. These services are carried on, as far as possible, on commercial principles, nevertheless the desire of the Government to extend the facilities of both the post and telegraph to every part of the Colony has led to an expenditure each year in excess of the receipts. It is satisfactory, however, to find that the loss is steadily decreasing. In 1888 it was £53,462, while in 1891, as previously shown, it was £46,081. It is quite possible that the principle of affording the benefit of postal and telegraphic communication to every district of New South Wales would be adhered to even if the system ultimately failed to become self-supporting; but the time cannot be far distant when the revenue derived will more than meet the expenses. The following table shows the revenue and expenditure in various years enumerated; further information regarding the postal and telegraphic services will be found elsewhere :—

Revenue and Expenditure.

Year.	Revenue.	Expenditure.	Year.	Revenue.	Expenditure.
	£	£		£	£
1860	57,033	88,159	1886	486,218	610,651
1865	102,867	134,185	1887	524,298	634,077
1870	115,876	124,002	1888	562,909	616,371
1875	164,008	265,693	1889	597,988	628,182
1880	286,134	396,301	1890	629,894	648,993
1885	472,564	570,999	1891	648,553	694,634

Receipts from Miscellaneous Services.

The miscellaneous receipts under the head of Services comprise fees of office, which amounted to £103,909 in 1891; public school fees, £75,916; pilotage and harbour fees, £68,280; mint and other receipts, £18,092; the total being £266,197. The revenue derived from the services above mentioned is merely nominal, as the cost of the work performed in many cases far exceeds the revenue. The amount received during each of the last ten years was :—

Year.	Miscellaneous Services.	Year.	Miscellaneous Services.
	£		£
1882	176,466	1887	211,274
1883	181,809	1888	242,414
1884	197,666	1889	301,573
1885	203,209	1890	218,713
1886	213,879	1891	266,197

Miscellaneous items of revenue.

The revenue derived from other sources, besides Taxation, Lands, and Services, amounted to only £247,533 in 1891, made up by rents, fines, and forfeitures, and a variety of miscellaneous receipts:—

	£
Rents of Government Property other than land	70,643
Fines and forfeitures	19,537
Interest on bank deposits	13,047
Other receipts	144,306

PUBLIC EXPENDITURE.

Expenditure per head of the population.

The expenditure of the Colony, exclusive of loans, during the ten years which closed with 1891, amounted on an average to £8 19s. 1d. per head. During 1891 the gross expenditure amounted to £10,478,673, of which sum £9,633,045 was expended on account of services rightly chargeable to the year itself, whilst the balance, amounting to £845,628, was for the service of 1890 and previous years. The liabilities outstanding at the close of 1891 for the services of that year cannot be stated with any exactitude, but it is probable they amount to a sum equal to that paid on account of the services of previous years. The absolute amount expended during each of the years named was as follows:—

Public Expenditure, exclusive of Expenditure from Loans.

Year.	Railways and Tramways.	Post and Telegraphs.	Public Instruction.	Immigration.	Interest on Debt and Extinction of Loan.	Other Expenditure, including Public Works.	Total Expenditure.
	£	£	£	£	£	£	£
1860	42,084	85,159	55,049	27,961	165,759	936,765	1,312,777
1865	113,606	134,185	80,566	20,581	267,720	1,118,149	1,734,807
1870	214,015	124,002	132,688	352	933,162	1,198,761	2,602,980
1875	313,821	265,693	176,490	…………	618,179	2,019,841	3,394,024
1880	838,559	396,301	385,567	43,522	715,994	3,180,136	5,560,079
1881	786,269	421,594	552,363	45,966	719,752	3,257,739	5,783,683
1882	1,031,720	446,658	665,901	46,301	969,198	3,188,427	6,348,205
1883	1,439,327	504,055	879,120	112,319	927,905	3,932,287	7,795,013
1884	1,585,603	542,182	817,767	120,038	1,047,322	4,298,927	8,411,839
1885	1,729,894	570,999	751,335	52,050	1,300,184	4,157,672	8,562,134
1886	1,710,495	610,651	741,121	35,397	1,579,689	4,400,294	9,077,647
1887	1,695,716	634,077	728,003	32,251	1,692,421	4,453,724	9,216,192
1888	1,824,291	616,371	682,225	7,854	1,745,695	3,902,415	8,778,851
1889	1,782,530	628,182	697,224	8,073	1,805,770	4,328,492	9,250,271
1890	2,037,168	648,993	721,248	5,916	1,895,656	4,244,581	9,553,562
1891	2,357,032	694,634	769,746	4,564	1,905,016	4,747,681	10,478,673

The most noticeable feature in the table just given is the increase in the expenditure on railways and tramways, and in the interest and other expenses of the public debt. The first of these requires little comment, as it is dealt with elsewhere under Internal Communication; it will suffice to say that this amount represents the charge for working the public railways and tramways, and is really paid out of money already earned by them. The question of the interest on loans will be found treated at length in the part of this chapter devoted to the consideration of the public debt. With the figures of interest are included the amounts paid out of the general revenue towards reducing the public debt. These amounts are by no means large, and in 1891 amounted to £275,790, viz., £150,000 in redemption of Treasury Bills, £50,790 the annual instalment (less interest) due on loan 31 Vic. No. 11, and £75,000 towards reducing the public debt on Railways.

The expenditure per head of population for the same periods as in the previous table, is given below :— Expenditure per head.

Year.	Railways and Tramways.	Post and Telegraphs.	Public Instruction.	Immigration.	Interest on Debt. &c.	Other Services and Public Works	Total Expenditure less advances.
	£ s. d.	s. d.	s. d.	s. d.	s. d.	£ s. d.	£ s. d.
1860	0 2 6	4 11	3 3	1 8	9 8	2 14 8	3 16 8
1865	0 5 8	6 9	4 0	1 1	13 5	2 15 10	4 6 9
1870	0 8 9	5 1	5 5	......	38 1	2 8 11	5 6 3
1875	0 10 9	9 1	6 1	......	21 2	3 9 0	5 16 1
1880	1 3 0	10 11	10 7	1 2	19 8	4 7 3	7 12 7
1881	1 0 7	11 0	14 5	1 2	18 10	4 5 2	7 11 2
1882	1 5 10	11 2	16 8	1 2	24 3	3 19 11	7 19 0
1883	1 14 4	12 0	21 0	2 2	22 2	4 13 10	9 6 0
1884	1 15 11	12 3	18 6	2 8	23 9	4 17 5	9 10 6
1885	1 17 4	12 4	16 2	1 8	28 0	4 9 8	9 4 8
1886	1 15 4	12 8	15 4	0 8	32 7	4 10 8	9 7 3
1887	1 13 9	12 8	14 6	0 8	33 7	4 8 3	9 3 5
1888	1 15 3	11 11	13 2	0 2	33 9	3 15 3	8 9 6
1889	1 13 5	11 9	13 1	0 2	33 10	4 1 2	8 13 5
1890	1 16 11	11 9	13 2	0 1	34 5	3 17 1	8 13 5
1891	2 1 3	12 2	13 6	0 1	33 3	4 3 0	9 3 3

In the figures already given of the revenue of the Colony, it will have been noticed that the amount received on account of services rendered, that is, the earnings of the railways, tramways, water supply, and other receipts, are included with the general revenue. This is almost a matter of necessity so long as the expenditure includes interest on the public debt incurred to promote these services. As a consequence of this system, the annual cost of maintaining these services is also included in the expenditure. The figures given on page 648 do not admit of a ready distinction being made between these two kinds of expenditure, but as the information is necessary for the right understanding of the public accounts, the following statement has been compiled, which shows the progress of expenditure as classified under the three headings—public works and other expenses of the general government; working expenses of railways, tramways, water supply and sewerage; and interest on public debt. In addition to the actual expenditure, the rate per inhabitant is given :—

Details of expenditure per head.

Year.	Expenses of General Government and Public Works.		Working Expenses of Railways, Tramways, Water and Sewerage.		Expenses of Public Debt.	
	Total.	Per Inhabitant.	Total.	Per Inhabitant.	Total.	Per Inhabitant.
	£	£ s. d.	£	£ s. d.	£	£ s. d.
1860	1,104,934	3 4 6	42,084	0 2 6	165,759	0 9 8
1865	1,353,481	3 7 8	113,606	0 5 8	267,720	0 13 5
1870	1,455,803	2 19 5	214,015	0 8 9	933,162	1 18 1
1875	2,462,024	4 4 2	313,821	0 10 9	618,179	1 1 2
1880	4,005,526	5 9 11	838,559	1 3 0	715,994	0 19 8
1881	4,274,838	5 11 9	789,093	1 0 7	719,752	0 18 10
1882	4,307,084	5 7 11	1,071,923	1 6 10	969,198	1 4 3
1883	5,378,016	6 8 4	1,489,092	1 15 6	927,905	1 2 2
1884	5,643,680	6 7 9	1,720,837	1 19 0	1,047,322	1 3 9
1885	5,485,445	5 18 4	1,776,505	1 18 4	1,300,184	1 8 0
1886	5,753,546	5 18 8	1,744,412	1 16 0	1,579,689	1 12 7
1887	5,794,998	5 15 5	1,728,773	1 14 5	1,692,421	1 13 7
1888	5,172,606	4 19 10	1,860,550	1 15 11	1,745,695	1 13 9
1889	5,594,897	5 4 11	1,849,604	1 14 8	1,805,770	1 13 10
1890	5,533,276	5 0 5	2,124,630	1 18 7	1,895,656	1 14 5
1891	6,130,733	5 7 3	2,442,924	2 2 9	1,905,016	1 13 3

The figures in the foregoing table are carried back as far as 1860, but conditions have so greatly changed in the thirty-two years which have since elapsed that reference to these years can serve no useful purpose. If the last twelve years be examined, it will be found that the expenses of general government have increased by something like 50 per cent.; but, as population also increased at about the same ratio, the rate per inhabitant remained almost unchanged. The general tendency in progressive communities is for the cost of government per inhabitant to decline as population increases; the operation of this law is, however, not to be traced in the figures just given. During the last twelve years embraced in the statement, the cost of government has varied between £4 19s. 10d. and £6 8s. 4d., the years of least expenditure per inhabitant being 1888, 1889, and 1890, the highest being 1883 and 1884. Under the cost of general government are included civil, military, and legal expenditure, post and telegraph services, education, and such public works as are constructed out of ordinary revenue. The expenditure per head of population on account of some of these services—viz., post and telegraphs, education, and some minor ones—has either been stationary or declining. The position of the Government as the constructor of small local public works prevents that decrease in the expenses of general management which is so desirable. The absence of a law placing the responsibility of such works upon the districts actually concerned has necessitated the expenditure, out of the public funds, of large sums upon works only locally important, and, therefore, not strictly chargeable to the public revenue. The District Government Bill recently placed before Parliament proposes to remedy this state of things, and a decrease in the expenditure upon public works may be anticipated when this important and much-needed measure is passed.

Accumulated surplus revenue at the close of each year.

The accounts of the Treasury are closed on the 31st December in each year, so that the amounts of expenditure given in the preceding tables refer to the payments made during the currency of any year, irrespective of the date at which the liability occurred or was authorized. Thus payments during 1882 included liabilities as old as 1876; while some payments in 1891 were on account of 1885 and each of the intermediate years. Similar payments occur in every year, so that the figures relating to expenditure can only be taken as a partial presentation of the financial case of the country. The following figures are self-explanatory and cover the last ten years; they show the actual as well as the apparent expenditure during this period :—

Year.	Expenditure for Services of each year irrespective of date of payment.*	Expenditure during each year.		
		For Services of that and previous years.	Out of accumulated surplus.	Total, less advances.
	£	£	£	£
1882	6,330,936	5,824,245	523,960	6,348,205
1883	6,901,525	7,062,948	732,065	7,795,013
1884	7,658,129	7,813,414	598,425	8,411,839
1885	9,317,102	8,320,523	241,611	8,562,134
1886	8,536,411	9,005,178	72,469	9,077,647
1887	8,799,156	9,202,377	13,815	9,216,192
1888	8,623,012	8,758,640	20,211	8,778,851
1889	9,143,513	9,244,578	5,693	9,250,271
1890	9,423,264	9,549,885	3,677	9,553,562
1891	9,633,045	10,478,673	....	10,478,673

* Liabilities outstanding at the close of 1891 for that and previous years are not included.

PUBLIC DEBT.

Loans. In 1842 a loan of £49,500 was issued for the purposes of immigration, having a currency of two years, and bearing interest at the rate of 5¼d. per day, or 8 per cent. per annum for every £100 of stock. Several loans for similar purposes were raised during the period 1843–50, but were met out of revenue within a few years of the date of raising. In 1851, however, a sum of £79,600 was borrowed, also for immigration purposes, £15,800 only of which was paid out of the general revenue, the remainder being met by a fresh loan, and it is from this period that the Public Debt of the Colony may be said to date, for though it is true that all the existing Public Debt, with the exception of £40,000 due in 1893, was raised subsequent to 1867, the loans of the years 1851 to 1867 are represented in the present debt by the renewals which were effected as they became due.

Total amount authorised.

From 1842, the date of the first loan issued, to the 31st October, 1892, the total sum authorised to be raised was £76,118,565, of which amount stock to the value of £2,570,578 was authorised by Acts of Council, and the balance, £73,547,987, by Acts of Parliament. The amount of stock sold was £62,267,703, the gross sum realised being £60,680,886, and the net proceeds, after deducting charges, &c., came to £60,013,740. The amount authorised but not raised is £13,850,862. Debentures and Treasury Bills to the value of £2,335,570 have been redeemed absolutely, and £5,857,700 have been renewed. Thus, at the date mentioned, the Public Debt was £54,074,433, the amount of each class of stock and the annual interest thereon being as follows:—

Description of Stock.	Amount outstanding, 31st October, 1892.		Annual Interest thereon.
Debentures :—	£	£	£
Overdue, or unpresented, which have ceased to bear interest...	2,960		
Still bearing interest...............	12,757,900		
		12,760,860	555,819
Permanent Funded Stock	.. ..	530,189	21,208
Inscribed Stock	....	35,680,500	1,284,749
Treasury Bills..........................	....	2,900,000	117,625
Treasury Bills (deficiency in Revenue)	....	2,202,884	88,115
Total Public Debt	....	54,074,433	2,067,516

Public Debt in October, 1892.

Between the 31st December, 1891, and the 31st October, 1892, the Public Debt of the Colony was increased by the sum of £1,575,900; Treasury Bills and Stock to the amount of £3,100,000 having been issued, while Debentures and Bills to the value of £1,524,100 were paid off.

Inscribed stock.

The Inscribed Stocks Act was passed in March, 1883, and during the course of the same year two Loans were floated under the new conditions, the amounts of stock issued in each case being £3,000,000. The total amount of Inscribed Stocks issued to the 31st October, 1892, was £34,200,000, and the amount of Debenture Stock converted into the new scrip was £1,480,500, making a total of £35,680,500 Inscribed. This kind of stock has found much more favor in the London market than the old form of Debenture, and although the charges of negotiation to the Government are greater than prevailed under the former system the extra outlay has its compensation in the convenience afforded in dealing with the stock. All the Colonies now issue their loans as Inscribed Stock.

Stock at each rate of interest.

The following table shows the total amount of stock under each rate of interest. The stock bearing 6 per cent. represents the loans raised by the Municipality of Sydney for Water and Sewerage Works, now taken over by the State. With the exception of Municipal Loans to the amount of £58,000, and £2,700 Permanent Stock, all the Loans bearing 5 per cent. interest will mature in or before 1902; there were, however, also £2,960, overdue 5 per cent. Debentures outstanding on the 31st October, 1892, which have ceased to bear interest :—

Interest—per cent.	Amount of Stock.	Annual interest thereon.
	£	£
6	92,000	5,520
5	*4,369,260	218,351
4¼	650,000	27,625
4	20,468,973	818,759
3½	28,494,200	997,297
Total......	54,074,433	2,067,516

* Includes £2,960 overdue debentures.

Debt payable in London.

The greater part of the outstanding Public Debt, amounting to £48,937,300, was raised and is repayable in London, the balance, £5,137,133, including £2,852,884 Treasury Bills, is redeemable in the Colony.

Dates of repayment.

The date of repayment extends from 1893 to 1933, the sums repayable in the different years varying considerably in amount, the largest sum in any one year being £16,500,000 for 1924. The following table shows the due dates and amount repayable in each year:—

Description of Stock.	Interest per annum.	Issue.	Amount outstanding on 31st October, 1892.		Year when due.
		Authority.	Under each Act.	Total.	
	℘ cent.		£	£	
Debentures ...	...	Various Acts ...	...	2,960	overdue.
" ...	5	18 Vic. No. 35 ...	40,000	40,000	1893
Treasury Bills	4	55 Vic. No. 7 ...	1,250,000	1,250,000	1894
Debentures ...	5	26 Vic. No. 14 ...	162,000	832,000	1895
" ...	5	27 Vic. No. 14 ...	670,000		
" ...	5	29 Vic. No. 9 ...	219,400	2,627,400	1896
" ...	5	29 Vic. No. 23 ...	758,000		
Treasury Bills	4¼	55 Vic. No. 7 ...	650,000		
" ...	4	55 Vic. No. 7 ...	1,000,000		
Debentures ...	5	30 Vic. No. 23 ...	65,800	65,800	1897
" ..	5	31 Vic. No. 27 ...	177,200	177,200	1898
" ...	5	32 Vic. No. 13 ...	197,700	197,700	1899
" ...	5	34 Vic. No. 2 ...	407,100	857,100	1900
" ...	5	Under various Acts	450,000		
" ...	6	City of Sydney Water Works	5,000	404,900	1901
" ...	6	City of Sydney Sewerage Works	25,000		
" ...	5	35 Vic. No. 5 ...	374,900		
" ...	6	City of Sydney Water Works	25,000	459,000	1902
" ...	6	City of Sydney Sewerage Works... ...	34,700		
" ...	5	36 Vic. No. 2 ...	399,300		
" ...	4	36 Vic. No. 17 ...	1,901,500	1,901,500	1903
" ...	5	City of Sydney Water Works	20,000	58,000	1904
" ...	5	City of Sydney Sewerage Works... ...	38,000		
" ...	5	City of Sydney Sewerage Works... ...	2,300	2,300	1905
" ...	4	39 Vic. No. 18 ...	224,900	224,900	1906
" ...	4	38 Vic. No. 2 40 Vic. No. 12 41 Vic. No. 4	1,450,000	1,450,000	1908
" ...	4	38 Vic. No. 2 40 Vic. No. 12 41 Vic. No. 4	1,799,500	1,799,500	1909

Description of Stock.	Interest per annum.	Issue.	Amount outstanding on 31st October, 1892.		Year when due.
		Authority.	Under each Act.	Total.	
	₩cent.		£	£	
Debentures ...	4	41 Vic. No. 7 43 Vic. No. 11	2,863,700	2,863,700	1910
,, ...	4	City of Sydney Water Works	30,000	60,000	1912
,, ...	4	Municipal Council, Redfern, Sewerage Works.	30,000		
Inscribed Stock	3½	48 Vic. No. 26 ...	5,609,400	11,994,200	1918
,, ...	3½	52 Vic. No. 16 ...	1,390,600		
,, ...	3½	54 Vic. No. 33 ...	4,994,200		
,, ...	3½	44 Vic. No. 28 ...	6,786,700	16,500,000	1924
,, ...	3½	45 Vic. No. 22 ...	1,000,000		
,, ...	3½	46 Vic. No. 23 ...	2,000,000		
,, ...	3½	48 Vic. No. 26 ...	6,713,300		
,, ...	4	41 Vic. No. 7 43 Vic. No. 11	5,609,000	7,186,300	1933
,, ...	4	44 Vic. No. 12 ...	1,262,000		
,, ...	4	44 Vic. No. 28 ...	315,300		
Debentures ...	5	31 Vic. No. 11 ...	384,200	384,200	*
Funded Stock	4	36 Vic. No. 21 ...	530,189	530,189	†
Permanent	5	18 Vic. No. 40 ...	2,700	2,700	
Treasury Bills	4	53 Vic. No. 9 ...	2,202,884	2,202,884	‡
Public Debt on 31st October, 1892				£54,074,433	

* Annual Drawings; last payment will be made in 1897. † Interminable. ‡ Annual payments of £150,000.

Government Trust Funds. The amount to the credit of the Government Trust Funds at the close of 1891, including the accounts of the Master in Lunacy and Master in Equity, was £4,922,055, of which £2,725,312 was invested in Government securities bearing interest at the rate of 4 per cent. per annum, while the balance was held as cash in Banks. The amount placed under each class of stock was :—

	£
Treasury Bills	2,073,884
4 per cent. Funded Stock	403,249
Debentures	247,100
Miscellaneous Securities	1,079
	2,725,312

Loan Fund Amalgamation. The specific purposes for which loans were raised were formerly stated in the Acts authorising them, and the proceeds could only be applied in the terms of such Acts. This practice was found

Loan Fund Amalgamation.

inconvenient, and on the 23rd April, 1879, the Loan Fund Amalgamation Act was passed; the Act provided that the proceeds of loans should be placed under one general account, and the measure has resulted in a considerable saving in interest, as it is now possible to keep the balance to the credit of Loans Account much lower than formerly. The following statement shows the expenditure of Loan Funds to December 31, 1891, distributed under the principal heads of service:—

Service.	Amount.		Percentage to Total.	
Directly Productive Works—	£	£		
Railways	34,090,975	......	69·3	
Tramways	1,491,417	......	3·0	
Water Supply	3,867,788	......	7·9	
Sewerage	1,701,411	......	3·5	
Electric Telegraphs	775,464	......	1·6	
Docks and Wharves	1,700,734	......	3·4	
Total	......	43,627,789	...	88·7
Harbours and Rivers	......	1,310,154	...	2·7
Roads and Bridges	......	701,282	...	1·4
Immigration	.....	569,930	...	1·2
Fortifications and Military Works	......	1,018,679	...	2·1
Other Public Works	......	1,934,673	...	3·9
Total all Services	......	49,162,507	...	100·0
Outstanding Treasury Bills to cover deficiency of Revenue	......	2,223,884		
Total Expenditnre	......	51,386,391		

Productive services.

It will be seen that out of the total amount, £49,162,507, shown in the above statements, £43,627,789 or 89 per cent. has been expended on directly productive works yielding or capable of yielding revenue towards meeting the charges for interest. Besides the sum just referred to, £3,946,109 has been spent on other works of a permanent nature, such as roads and bridges, improvements to harbours and rivers, lighthouses, schools, and public buildings, which, though not directly productive, have been undertaken for the development of the resources of the Colony, and for facilitating settlement. The balance of the £49,162,507, viz., £1,588,609, was expended on unproductive services—the items being £1,018,679 for fortifications and military works, and £569,930 for immigration. As for this latter amount, as it was spent to encourage settlement, it is a moot point whether it might not with some propriety be classed amongst productive services.

Treasury Bills.

The item of Treasury Bills to cover deficiency of revenue appears for the first time in the Public Debt statement of 1890, the deficiency being for the year 1886 and previous years; the original amount of these bills was £2,523,884, but up to the 2nd January, 1892, £300,000 had been paid off out of revenue, and a yearly reduction of £150,000 has been provided for. The total of £51,386,391, given in the foregoing statement, includes expenditure to the close of 1891; the expenditure on works since that date cannot be accurately stated until after the close of the current year.

Manner in which stock has been dealt with.

The table just given, showing the use to which moneys obtained by loans has been put, requires supplementing by a statement of the manner in which Stock sold has been dealt with. This information the following table gives, the particulars being brought down to 2nd January, 1892:—

	£	s.	d.		£	s.	d.
To Amount Stock sold, 16 Vic., No. 39	217,500	0	0	By Loans paid from New Loans	5,190,930	0	0
" Amount Stock sold, 17 Vic., No. 34, to 52 Vic., No. 16..........	50,926,919	9	2	" Loans paid from Revenue	1,681,940	0	0
" Amount Stock sold, 54 Vic., No. 33	4,500,000	0	0	" Treasury Bills paid from Revenue........	300,000	0	0
" Amount Stock sold, Treasury Bills........	2,523,884	0	0	" Outstanding Stocks (existing Public Debt)	50,995,433	9	2
£	58,168,303	9	2	£	58,168,303	9	2
To Amount Loans repaid from Revenue........	1,681,940	0	0	By Amount spent on Public Works........	49,162,507	7	11
" Total Amount Outstanding Stocks (existing Public Debt) ..	50,995,433	9	2	" Amount of Outstanding Treasury Bills	2,223,884	0	0
" Dr. Balance, General Loan Account........	807,241	10	1	" Amount short-raised, including charges....	2,098,223	11	4
£	53,484,614	19	3	£	53,484,614	19	3

Outstanding Stock at beginning of 1892.

The amount of Stock outstanding on the 2nd of January, 1892, was £50,995,433, while the expenditure to that date was £51,386,391, showing an expenditure of £390,958 in excess of the existing stock; this anomaly is accounted for by the fact that the Loan Account is overdrawn to the extent of £807,242, and Stock has been redeemed out of revenue to the amount of £1,681,940. These two items make £2,489,182, but from this must be deducted £2,098,224, the amount short-raised—that is, the sum by which the Stock sold exceeded the net proceeds—the difference is £390,958, the amount already given.

Public debt, and expenditure from loans.

The following statement shows the Public Debt, the actual expenditure on Public Works, &c., and rate per head of population, from 1860 :—

Year.	Public debt at close of year.				Actual expenditure on public works and services (Redemptions excluded).							
					At the close of each year.				During each year.			
	Amount.	Per inhabitant.			Amount.	Per inhabitant.			Amount.	Per inhabitant.		
	£	£	s.	d.	£	£	s.	d.	£	£	s.	d.
1860 ...	3,830,230	10	19	9	3,415,692	9	16	0	377,564	1	2	0
1865 ...	5,749,630	14	1	0	5,780,364	14	2	7	554,872	1	7	9
1870 ...	9,681,130	19	8	3	9,136,166	18	6	5	621,913	1	5	4
1875 ..	11,470,637	19	6	0	12,646,306	21	5	7	1,149,152	1	19	4
1880 ...	14,903,919	20	1	9	16,770,851	22	12	1	1,668,638	2	5	8
1881 ...	16,924,019	21	13	1	19,168,219	24	10	7	2,397,368	3	2	8
1882 ..	18,721,219	22	19	5	22,000,978	26	19	11	2,832,759	3	10	11
1883 ...	21,632,459	25	2	4	25,266,689	29	6	8	3,265,711	3	15	10
1884 ...	30,101,959	33	5	3	28,941,395	31	19	7	3,674,706	4	3	2
1885 ...	35,564,259	37	9	1	32,837,540	34	11	7	3,896,145	4	4	0
1886 ...	41,034,250	41	9	6	36,603,896	37	0	0	3,766,356	3	17	8
1887 ...	40,995,350	40	3	7	38,568,915	37	16	0	1,965,019	1	19	1
1888 ...	44,185,149	42	0	9	40,645,222	38	13	4	2,076,307	2	0	1
1889 ...	46,892,449	43	6	11	42,271,122	39	1	6	1,625,900	1	10	6
1890 ...	48,425,333	43	3	4	44,412,340	39	11	9	2,141,218	1	18	10
1891*...	50,995,433	43	15	3	49,162,507	42	3	9	4,750,167	4	3	1

* 2 January, 1892.

In several years of the foregoing series the amount of money expended exceeded the loans raised, and in those years advances were made to loan funds from Consolidated Revenue or other funds. Included in the outstanding Public Debt at the beginning of 1892 are Treasury Bills to the amount of £2,223,884, and Municipal Loans assumed by the State to the amount of £210,000.

The former is a liability that was only brought into account in 1890, though chargeable to 1886 and previous years; this will account for the increase in the Public Debt in 1890, no loan having been floated during that year. The Municipal Loans, which were expended on local Water and Sewerage Works, taken over by the Government, are debited to the years 1888 and 1889, when the State relieved the local bodies of those works by placing them under the Board of Water Supply and Sewerage, while in the total loan expenditure these amounts have been debited to each year since the liability was undertaken.

Municipal Loans.

Cost of public works charged to general revenue.

It has been a practice of long standing to charge the cost of constructing public works, other than those of national importance or built equally for the requirements of the future as of to-day, to the general revenue of the Colony. This practice is rarely departed from, and the amount of loans spent on works which do not come within such definition is comparatively trifling.

Present amount of public debt.

The present amount of the public debt is undoubtedly large; but no portion of it is due to war charges and, as shown in the preceding pages, very little to works of an entirely unproductive character, so that the burden on the resources of the country is more apparent than real. The general assets of the Colony amount to considerably more than three times the liabilities, and for the most part comprise securities which could readily be converted into money. At a moderate computation the public estate of New South Wales is estimated to be worth £181,925,500 according to the details given on page 670.

Estimated value of the public estate.

Advances from surplus revenue.

Owing to the large surplus revenue available, and the amount of other funds in the hands of the Government, the amount of Public Debt was less, in most of the years from 1872 to 1884, than the sum actually expended on account of loans, as advances were made in anticipation of loans authorized to be floated in the London market. The advances in some years reached considerable sums. This was noticeable in 1882, when the total advances amounted to not less than £4,213,773.

Increase of debt from 1861.

The following table shows the increase of the Colony's indebtedness, both absolute and in proportion to population, for the three decades from 1861 to 1891 :—

Period.	Increase in Public Debt.		Increase in interest and charges in Public Debt.	
	Absolute.	Per inhabitant.	Absolute.	Per inhabitant.
	£	£ s. d.	£	£ s. d.
1861–71 ...	6,596,700	9 5 7	329,835	0 9 3
1871–81 ...	6,309,689	1 2 9	236,755	0 0 10*
1881–91 ...	34,071,414	22 2 5	1,176,462	0 13 9
1861–91 ...	46,977,803	32 10 9	1,743,052	1 2 2

*Decrease.

During the period 1861–1871 the Public Debt increased by nearly £6,597,000 ; in 1871–1881 the increase was £6,310,000 ; and in the ten years following a further liability of £34,071,000 was incurred, representing an increase of £22 2s. 5d. per inhabitant. During the last period named great activity was displayed in the construction of Public Works, notably in the extension of Railways and Tramways, of which 1,224 miles were opened, involving an expenditure of £20,631,485. In the metropolitan area and its environs a comprehensive system of Water Supply and Sewerage was also undertaken and almost completed. The amount expended on these services, together with a small expenditure on similar works in the country, was £5,002,880, thus giving a total for Railways and the other services mentioned of £25,634,365, or 85·5 per cent. of the whole loan expenditure. Of the remaining expenditure from loans, £1,614,358 was spent on Electric Telegraphs, and Docks and Wharves, works of a directly productive nature, although at present not yielding actual revenue. On Harbours, Rivers, Roads, and Bridges the amount expended was £798,276, and the balance of the loan expenditure, amounting to £1,947,289, was incurred mainly for works and buildings necessary for the development of the resources of the Colony, or incidental to its progress. During the same period the amount spent on renewal of loans was £2,352,600;

Construction of Public Works.

the sums quoted in the following table do not of course include this item :—

Service.	Total Loan expenditure from 1881 to 1891 (exclusive of redemptions.)	Per centage to Total.
Directly Productive Works—	£	
Railways and Tramways	20,631,485	68·8
Water and Sewerage	5,002,880	16·7
Telegraphs, Docks, and Wharves	1,614,358	5·4
Roads and Bridges, Harbours and Rivers	798,276	2·6
Other Public Works	1,947,289	6·5
Total £	29,994,288	100·0

Expenditure, though high, justifiable.

From the foregoing remarks it will be clear that although the loan expenditure during the last ten years reached a very high figure, the expenditure on the whole may be justified, as over 85 per cent. of the proceeds of loans were spent on services which have almost ceased to be a burden on the country. In addition to this expenditure, £1,614,358, or 5·4 per cent., was incurred for services which are rightly classed as directly productive, as tending to facilitate the internal commerce of the country. Again, a large proportion of the expenditure on railways and tramways, and (in late years) for water supply and sewerage, was incurred in completing these systems, by which the Colony will be enabled to obtain an increased return on capital invested. This view will find ample confirmation from the facts which will be found set out in the chapters on "Internal Communication" and "Local Government."

Probable decrease of expenditure.

The growth of the expenditure which marked the past decade is hardly likely to be continued, even if there were a disposition on the part of the Government and funds were available, as the railway construction, for which service loans have been chiefly raised, will be confined to perfecting the various systems in operation, and the gradual extension of the coast-lines north and south.

Improvement of the Colony's credit.

The extent to which the credit of the Colony has advanced in the eyes of the British capitalist since the year 1870 will be seen from the following figures. The first column shows the average interest computed on the nominal amount of loans outstanding at the end of each year under review; the other column shows the interest on the amount actually realised. The comparison is from an investor's point of view :—

Year.	Average Interest on nominal Amount of Loans.	Interest on Amount actually realised.
1870	4·82	5·07
1875	4·87	5·12
1880	4·61	4·84
1885	4·19	4·35
1890	3·89	4·05
1891	3·81	3·87

The selling price of a loan is not perhaps the most exact test which may be applied to ascertain the credit of a country in the London market. There are many causes which may combine to influence adversely the price obtained by tender, and it will be evident that in some of the instances given in the table on page 667 the selling price of loans was influenced by circumstances entirely apart from the credit of the colonies concerned. A truer gauge of credit will be found in the selling price and interest yielded to investors by representative stock at a given date. The following table shows the interest returned by the stock of different colonies in June, 1892, due allowance being made in each case for accrued interest, and for repayment of loans at par on maturity. Similar figures for the same month of 1868, 1878, and 1888 have been added :—

Selling price of Colonial stock.

Country.	1868.			1878.			1888.			1892.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
New South Wales	5	0	0	3	16	3	3	6	9	3	14	0
Victoria	4	17	6	4	2	6	3	7	9	3	16	9
Queensland	5	6	3	4	5	0	3	14	6	3	16	11
South Australia	5	2	6	4	2	6	3	12	0	3	16	1
Tasmania	5	8	9	4	12	6	3	17	6	3	17	2
New Zealand	5	1	3	4	15	0	4	2	6	3	12	11
Canada	5	12	6	4	9	0	3	4	0	3	7	7
Cape of Good Hope	5	1	3	4	11	3	3	14	6	3	9	3
Natal	5	11	3	4	11	3	3	17	0	3	15	5
India	3	13	9	3	10	6	3	6	0	3	1	3

Relative position of N. S. Wales securities.

It will be seen that in 1888 New South Wales held a very high position amongst the colonies who sought aid from the British investor; its stocks were selling at a superior price to those of any of the countries named, India and Canada alone excepted. Since 1888 things have vastly changed, and in July, 1892, New South Wales stock held a position below even the most heavily burthened of the other Australasian Colonies. If the selling price of stock be an indication of the opinion investors held of the stability of the country, the price of New South Wales securities is certainly anomalous, as there is nothing in the history of any of the countries mentioned above, or in the nature of their resources, to warrant even the slightest preference being shown to their stock. The resources of a country and its ability to meet its engagements (as in the case of New South Wales, for instance) may be implicitly relied on by investors, but it is evident there are other considerations affecting the sale of stock to which the intrinsic goodness of the investment must at times give way. This is a lesson which Australasian Treasurers have now by experience been compelled to learn.

New South Wales stock stood, in July, 1892, at a figure calculated to yield an investor a return of £3 14s. per cent., while 14 years previously the return was £3 16s. 3d., showing a fall of only 2s. 3d. in that period, The uncertainty which prevails in the minds of persons who trade in stocks as to the intentions of the various Governments in regard to the placing of new loans in London has operated to greatly depress the market for Australian loans, nor is there any well-founded hope that prices will improve, as nearly all the colonies are anxious to raise money for the prosecution of public works to which they stand committed.

The figures given in the following statement are slightly different from those in the table on page 666, which deals with the question from an investor's point of view. In this table the actual rate paid by the Government is the point intended to be brought out, and in order to do this every charge has been taken into consideration, as well as the repayment of the loans at par on maturity.

Loans floated during period 1881—1891.

Date of Issue.	Years of Currency.	Nominal.		Gross Proceeds.	Charges and accrued Interest.		Net Proceeds.		Interest per £100 sterling.			
		Interest per cent.	Amount of Loan.		Charges other than Accrued Interest.	Accrued Interest as per Prospectus.	Total.	Per cent.	Nominal Interest on net Proceeds.	Gain or loss in interest by redemption at par on maturity. Gain.	Gain or loss in interest by redemption at par on maturity. Loss.	Actual interest paid by the Government.
			£	£	£	£	£	£	£ s. d.	s. d.	s. d.	£ s. d.
1881	30	4	2,050,000	2,120,697	12,267	13,019	2,095,411	102·22	3 18 3	2 7	......	3 15 8
1882	30	4	2,000,000	2,042,968	11,784	19,463	2,011,721	100·59	3 19 6	0 8	......	3 18 10
1883	50	4	3,000,000	3,001,067	32,745	38,416	2,929,906	97·66	4 1 11	......	0 3	4 2 2
1883	50	4	3,000,000	3,018,790	39,623	36,411	2,942,756	98·09	4 1 6½	......	0 2½	4 1 9
1884	40	3½	5,500,000	5,152,386	85,737	51,764	5,014,855	91·18	3 16 9	......	1 8	3 18 5
1885	40	3½	5,500,000	5,042,041	94,702	51,210	4,896,129	89·02	3 18 7½	......	2 3½	4 0 11
1886	38	3½	5,500,000	5,247,692	90,799	103,106	5,053,787	91·89	3 16 2	......	1 10	3 18 0
1888	30	3½	3,500,000	3,626,341	55,096	36,883	3,534,362	100·98	3 9 3¾	1 0¾	......	3 8 3
1889	30	3½	3,500,000	3,584,105	57,894	40,996	3,485,215	99·58	3 10 3½	......	0 1½	3 10 5
1891	27	3½	4,500,000	4,276,030	65,014	28,523	4,182,493	92·94	3 15 3¾	......	2 1¼	3 17 5

Recent Loans of Australian Colonies.

The most successful loan of the ten years was that of 1888 on which the Government pays £3 8s. 3d. per cent.; the yield to the original investor being only £3 5s. 6d.; this low rate was undoubtedly owing to the fortuitous circumstance of the Goschen Conversion, which caused investors to turn their attention to Colonial securities. The loan of 1889 cost the Colony £3 10s. 5d. per cent., and was a better test of its credit. Since the floating of these loans a very material change has taken place, so that, when the necessities of the Treasurer compelled him to borrow in 1891, to obtain funds to complete urgent public works, he was forced to accept a net price of 92·94 or £8 lower than the loan of 1888.

To the investing public, however, the two issues in 1883 yielded the largest return during the period under review, and were the dearest to the Colony. The rate per cent. yielded to investors on each of the loans mentioned in the previous table is given herewith:—

Year of Issue.	Nominal Rate per cent.	Interest to Investors per £100 sterling.			
		Interest on Principal.	Gain or loss by redemption at par on maturity.		Actual return to Investors in original Stock.
			Gain.	Loss.	
		£ s. d.	s. d.	s. d.	£ s. d.
1881	4	3 17 9	....	3 2	3 14 7
1882	4	3 19 1	....	1 4	3 17 9
1883	4	4 1 0	0 2	....	4 1 2
1883	4	4 0 6	0 1	....	4 0 7
1884	3½	3 15 6	1 7	....	3 17 1
1885	3½	3 17 2	2 0	....	3 19 2
1886	3½	3 14 10	1 7	....	3 16 5
1888	3½	3 8 3	....	2 9	3 5 6
1889	3½	3 9 2	....	1 4	3 7 10
1891	3½	3 14 2	2 6	....	3 16 8

The following statement shows the terms on which the principal colonies were able to borrow in the London Market during the last three years, the computations allowing for the repayment of the various loans at par on maturity :—

Colony.	Date of Negotiation.	Principal.		Currency of Loan.	Average rate per cent. at which Stock was sold.		Rate per cent. to Investors allowing for redemption at par on maturity.
		Rate of Interest.	Amount.		Gross Amount.	*Ex* Accrued Interest.	
	1889.	Per cent.	£	years.	£ s. d.	£ s. d.	£ s. d.
Victoria	January.	3½	3,000,000	35	103 5 11½	102 14 10	3 5 5
South Australia..	January.	3½	1,317,800	40	100 1 10	99 4 6	3 10 8
Tasmania........	April....	3½	1,000,000	30 to 50	98 5 8¼	97 13 6	3 12 0
New South Wales	July	3½	3,500,000	30	102 8 0¾	101 4 8	3 7 10
Western Australia	July	4	100,000	45	108 15 3	108 1 11	3 6 7
New Zealand	October..	3½	2,700,000	50	95 16 8	95 10 2	3 13 11
	1890.						
Queensland......	March ..	3½	2,264,734	34½	97 16 7	96 7 4	3 13 0
Victoria	April....	3½	4,000,000	34	101 10 4½	100 2 4	3 9 7
	1891.						
South Australia..	February	3½	*455,400	48	98 1 5	97 4 6½	3 12 5
Victoria	April....	3½	2,000,000	35	97 11 4	96 4 3	3 13 10
Queensland......	May-June	3½	2,500,000	40	89 19 4½	89 15 0	4 0 3
Victoria	July ...	3½	1,000,000	34½	96 5 5	96 2 4	3 14 0
Western Australia	July	4	250,000	40	100 10 10	99 1 6¼	4 0 11
New South Wales	Sept.....	3½	4,500,000	27	95 0 5	94 7 9	3 16 8

* Part of the £1,532,913 loan.

Under the Inscribed Stock Act of 1883 the loans of the Colony are now negotiated by the Bank of England, although the first two loans, amounting to £6,000,000, floated under the new conditions, were negotiated by the Bank of New South Wales and inscribed by the Bank of England. The particulars of these loans are shown in the following table, in which the net proceeds differ somewhat from the returns on page 665. The charges herewith include only those of negotiation, while in the former table the accrued interest is also deducted from the net proceeds :—

Amount of principal.	Currency, in years.	Date from which interest accrued.	Gross proceeds.	Charges.						Net proceeds.
				Brokers' commission.	Bank commission.	Discount on balance of scrip, paid up in full.	Stamp duty.	Postage and petty expenses.	Total.	
£ 3,000,000	50	July 1883	£ 3,001,067	£ 7,235	£ 5,000	£ 1,495	£ 18,750	£ 265	£ 32,745	£ 2,968,322
3,000,000	50	Jan. 1884	3,018,790	7,494	5,000	8,065	18,750	314	39,623	2,979,167
5,500,000	40	Oct. 1884	5,152,386	13,730	27,500	9,573	34,375	559	85,737	5,066,649
5,500,000	40	Oct. 1885	5,042,041	13,656	27,500	18,391	34,375	780	94,702	4,947,339
5,500,000	40	July 1886	5,247,692	13,713	27,500	14,443	34,375	768	90,799	5,156,893
3,500,000	30	Mch. 1888	3,626,341	8,729	17,500	6,341	21,875	651	55,096	3,571,245
3,500,000	30	June 1889	3,584,105	8,667	17,500	9,141	21,875	712	57,895	3,526,210
4,500,000	27	Sept. 1891	4,276,030	11,072	22,500	2,605	28,125	712	65,014	4,211,016

Cost of inscription.

The first and second loans in the table just given were for £3,000,000 stock, and the next three for £5,500,000, while the loans of 1888 and 1889 were each £3,500,000 stock, and that of 1891 was for £4,500,000 stock. The cost of inscription paid to the Bank of England for the first two loans in the table was £600 per million in addition to the charges mentioned. The charges on these loans, inclusive of the cost of inscription, amounted to 1·16 and 1·38 respectively on the capital value, and 1·15 and 1·37 per cent. on the gross proceeds.

Charges on loans.

The charges incidental to the floating of the last five loans shown, which were negotiated by the Bank of England, amounted to 1·72, 1·65, 1·57, 1·65, and 1·44 per cent. respectively upon the capital value, but on the gross amount raised the percentage for each loan was 1·88, 1·73, 1·52, 1·61 and 1·52 per cent.

Conversion of debentures.

Debentures to the amount of £2,000,000, issued in July, 1882, were afterwards authorised to be converted into Inscribed Stock at the option of the holders, a privilege which was availed of to the extent of £1,186,300 only. During 1892, £294,200 of matured 5 per cent. bonds were converted into 3½ per cent. inscribed stock at the desire of the holders, and £200,000 worth of stock was taken over by one of the London banks. The total amount of inscribed stock outstanding on the 31st October, 1892, is therefore, as previously stated, £35,680,500.

New issue of funded stock.

A new departure in the matter of loan raising was made by the Colony in October, 1892. An Act was passed by Parliament authorising the issue of 4 per cent. funded stock at a minimum price of par. The loan is to have a currency of twenty years after the last debenture has been issued, and may be redeemed on twelve months' notice being given by the Treasurer. The debentures will be of any amount required by the purchaser from £10 upwards, and interest will be paid half-yearly. It is confidently expected that a large part of this issue will be sold at a premium. The first sales of these debentures were made on the 8th November, 1892. At the 3rd January, 1893, £230,500 of this stock had been disposed of at par.

Interest on public debt.

The interest paid on the public debt of the Colony during 1891 was £1,864,191, but from this must be deducted interest on loan moneys amounting to £13,047, so that the net expense was £1,851,144, while the net return from works constructed from loans was £1,433,010, leaving £418,134 to be made good from general revenue, a sum equal to 0·82 per cent. on the loans outstanding at the close of the year. Taking a reasonable view of the state of the Colony the sum just mentioned cannot be looked upon as at all considerable.

Revenue from public works.

At present the net revenue from the public works of the country is entirely comprised in that derived from Railways, Tramways, and Water Supply and Sewerage; Electric Telegraphs and Docks and Wharfs, although in the same category, do not at present yield a net revenue. The Water and Sewerage Works of the Metropolitan area are not yet completed, but these services in 1891 yielded a surplus of £21,074 above the amount required to be expended on maintenance, management, depreciation, and interest on capital expenditure. When, however, these undertakings are completed, and the railways are in full operation, the sum available to meet interest and other charges on the public debt, should leave little to be made good from the general revenue of the Colony.

PUBLIC WEALTH.

Assets as against liabilities.

In the foregoing pages much has been said of the indebtedness of the Colony; it would, therefore, be only fair to give a *per contra* account, showing the resources on which the Colony may rely as security for the public creditors. The following is a statement of the value of the public estate towards the close of 1892:—

Productive Works:—		
Railways and Tramways		£39,410,800
Water Supply		3,344,200
Sewerage		1,447,300
Electric Telegraphs		750,000
Docks and Wharves		1,800,600
Harbours and Rivers		2,853,400
Roads and Bridges		12,400,000
Public Buildings		8,240,000
Public Lands:—		
Under pastoral lease	£82,585,000	84,112,000
Under mineral lease	1,527,000	
Other public lands		13,896,000
Balance due on lands sold conditionally		13,671,200
Total Public Estate		£181,925,500

Value of railways.

The present value of the Government railways and tramways has been taken at £39,410,800. This includes £1,010,832 for lines not completed, and makes allowance on the negative side for lines which, though in work, are likely to remain unproductive, or on which a loss may be expected. That the estimate is reasonable may be judged from the fact that the net revenue for the last financial year was £1,249,543, representing a return of 3¼ per cent. on the value set against them, notwithstanding the fact that many miles of line have been only recently opened for traffic. The amount expended on railway and tramway works is £35,423,100, and the value of lands appropriated or resumed for these services is £2,596,000. These two items make a total cost of £38,019,100, or about £1,392,000 below the amount at which these works stand in the foregoing estimate. This is a very moderate advance, seeing that the lines are now maintained in thorough repair, and there has been a very material increase in population and wealth since railway construction was first undertaken in the Colony.

Value of public works.

The value of other works and services is based on the detailed returns supplied by the various public departments, allowance being made in every case for depreciation—several millions being written off on this account.

Value of public lands.

The public lands form an asset equivalent to £98,000,000. Of this sum £84,112,000 represents the value of the lands leased for pastoral and mining purposes, comprising an area of 132,425,600 acres, from which an annual rental of £882,235 is drawn. It may perhaps be considered that the capital value of these lands should be placed at a lower figure than that set down, as the yearly return from rent represents little more than 1 per cent. This would be a valid contention were the public estate leased to the greatest advantage, but such is by no means the case. An area amounting to 53,657,500 acres is held under a day to day tenure, and at a correspondingly low rental, and indeed, generally speaking, the pastoral rents are very light. The figures given represent a value of under 13s. per acre, whereas no sales of State lands can be made at less than twenty shillings per acre, and the value placed by owners on pastoral and farming lands in their possession at the taking of the Census averaged £2 16s. 6d. per acre. The balance due on free selections, £13,671,200, represents the purchase money still to be paid on land conditionally purchased; this sum bears interest at the rate of partly 4 and partly 5 per cent.

Productive works.

The public wealth given in the foregoing statement may be divided into directly productive and indirectly productive. To the first category may be assigned works to the value of £46,752,900, and to the latter £23,493,400. The productive works yield a net revenue of £1,433,010, and to this may be added rent and fees from land, £882,235, and £372,900, interest on balances of conditional purchases, so that the Colony has a revenue of £2,688,145, or £620,629 in excess of the whole charge for Public Debt, without having to resort to taxation of any kind, and without parting with any more of the public lands. This fact alone ought to be evidence, if any such were wanted, of the ability of New South Wales to meet its engagements with the public creditors. But this is a point on which little need be said, for the security enjoyed by those who hold the debentures of the Colony lies more in the wealth and integrity of the people than in the actual possessions of the Government. In another chapter the wealth of the people is dealt with at length, from which it will appear that the total value of the private estate of the Colony is £404,148,000, the municipal £7,213,000, and, as given in this chapter, the public estate is valued at £181,925,500, so that the gross wealth of the Colony is £593,286,500, or £509 per inhabitant.

Security for creditors.

PART XXI.

Accumulation.

Necessity for accurate estimates of a country's wealth.

IT may be safely taken for granted that it is a very desirable thing to have from time to time accurate estimates of the wealth of a country, and though it is a common enough error in comparing the well-being of the people of different countries to make the item of accumulated wealth play a more important part than it deserves, it is none the less true that no clear estimate of the progress of a country can possibly be obtained unless the question of the accumulation of wealth be made an important factor of such estimate.

Advantage taken of the Census

Since the first issue of this book in 1887, a yearly estimate of the public and private wealth of the Colony has been prepared. The occurrence of the Census, in 1891, afforded an opportunity of obtaining information from sources not usually open, and though in some minor instances resort had still to be made to somewhat imperfect data, on the whole the present estimate of the private wealth of New South Wales may be taken as fairly exact, and it is satisfactory to find that previous estimates have been sustained.

PRIVATE PROPERTY.

Value of private property.

The private property in the Colony is estimated at the value of £404,148,000, comprised as follows :—

	£
Land	179,043,000
Buildings and permanent improvements	126,896,000
Live stock	38,224,000
Personal property, including household furniture	15,137,000
Machinery, and implements of trade	9,604,000
Coin and bullion	8,874,000
Merchandise	15,585,000
Shipping owned in the Colony	1,450,000
Mines and mining plant	9,335,000
Total	£404,148,000

Land.

The gross value of the land in private hands is £192,714,200, but allowance has been made for the purchase money owing by free selectors on conditional purchases to the amount of £13,671,200, which has been included in public wealth, the net value therefore is £179,043,000, as stated above. The basis of the estimate of the value of land outside municipal boundaries is the census returns made by the owners of the land. It is probable these returns are well within the mark, as landowners generally were impressed with the idea that these returns would be used against them in the event of Parliament imposing a land tax. Of course this was a groundless fear, nevertheless it operated to reduce the values which owners set against their estates.

Buildings and permanent improvements.

Land and houses within municipal areas are the subject of yearly valuations. Speaking generally there is a tendency to undervalue, and it is considered that this undervaluation averages about 10 per cent. For the purposes of the present estimate 5 per cent. only has been allowed. The annual and capital value of property in municipalities will be found given in detail in the chapter of this volume relating to "Local Government." The number of dwellings and other buildings in the Colony is approximately 236,000. Of these 139,000 are within the confines of municipalities and 97,000 beyond.

Value of improvements.

The value of permanent improvements effected on the purchased lands of the Colony and on pastoral holdings is estimated by the Chief Inspector of Stock at £80,429,000. The Census and Industrial Returns Act provided for a valuation of this form of investment, and the returns of the land-owners gave £44,920,400, or not more than 56 per cent. of the Chief Inspector's estimate. It is probable the returns obtained under the Census Act are understated, the same reason probably operating in regard to the under-valuation of improvements as that which led to the undervaluation of the land on which they are situated. The lower estimate has, however, been here adopted.

Live stock.

The estimate for live stock includes the value of sheep, horned cattle, horses, pigs, and other classes of stock, it being based on the market values of the animals on the farms and stations.

Personal property, including household furniture.

The estimated value of furniture is set down at £10,563,000, which is not more than 12·5 per cent. of the value of the houses; this may, perhaps, be considered too low when it is borne in mind that it is usual in England to estimate the value of furniture alone at half the value of the houses furnished. Personal property has been valued at £4,574,000, or about £4 per inhabitant.

Machinery and implements of trade.

The estimate for machinery and implements of trade includes the value of all machinery and plant, except that used for mining purposes. The value of the implements and plant used in the pastoral, agricultural, and dairy industries is according to actual returns. The value of plant used in the manufactories is based on the schedules annually collected in regard to the various industries of the Colony.

Coin and bullion.

The return of the amount of coin and bullion in circulation and deposited in banks, is according to the estimate of the authorities of the Sydney Mint and the sworn returns of the banks.

Merchandise.

Merchandise represents the value of the goods and stocks of all kinds, whether in stores or shops, or at the place of production, and amounts in value to £15,585,000.

Shipping owned in the Colony.

The shipping has been valued at £21 per ton for steamers and £6 per ton for sailing vessels. These averages are somewhat lower than those adopted in previous estimates.

Mines and mining plant.

The value of the mines is based on their present market value, which is undoubtedly depressed. During the last two years, the nominal values of mining property—chiefly silver, have fallen two-thirds, so that the figures in the present estimate are very greatly reduced compared with those of previous years.

MUNICIPAL PROPERTY.

Value of municipal property.

A statement of the wealth of the Colony would not be complete without a reference to the property of the various local government districts or municipalities. Like the general Government, the municipalities have works productive of revenue, and works which are only indirectly productive. In the first category are water-supply works, sewerage, gas-works, electric-lighting plant, baths, markets and saleyards, wharves, municipal and other buildings. The value of property of this kind amounts to £2,765,200. Works not yielding direct revenue are chiefly made roads and bridges, to the value of £4,285,100. Municipalities had to the credit of sinking funds for payment of their loans the sum of £162,700. The total value of properties of municipalities was therefore £7,213,000, against which there was a debt of £1,793,775.

PUBLIC, MUNICIPAL, AND PRIVATE WEALTH.

Total wealth of New South Wales.

In an earlier chapter an estimate is given of the public resources of the Colony. Adopting the figures therein given, the whole wealth of New South Wales is as follows :—

Value of public estate	£181,925,500
,, municipal estate	7,213,000
,, private property	404,148,000
Total	£593,286,500

Against this total must be placed the public indebtedness of £50,995,433, of which £46,472,000 is held by persons outside the Colony; the municipal indebtedness of £1,793,775, of which about £1,128,800 is held in London, and the private indebtedness. The amount of this last item is somewhat difficult to determine. The total amount of capital imported into the Colony can be estimated with some exactness, and it is probable that during the 21 years from 1871 to 1891 capital to the amount of £49,902,000 was introduced into the Colony, in addition to £38,961,000 obtained by the general Government.

Money from outside invested in Colony

Money has been freely poured into New South Wales, especially by British investors. During the 21 years which have elapsed since 1871 the Government have been entrusted with £38,961,000, the proceeds of loans raised for the prosecution of public works; £22,646,000 represents the amount of capital introduced by persons who have come to the Colony and made it their home; and £27,256,000 is the probable amount of other capital sent for investment. These three items make up a total of £88,863,000. That sum, it should be understood, did not actually reach the Colony, since there were large counter payments to be made on account of the earnings of capital already in the Colony, and the income drawn by absentees. The total of such payments was, during the 21 years referred to, £58,095,000, so that the actual capital imported was £30,768,000.

Importation of capital.

The importation of capital by the Government has already been dealt with at length in the portion of this volume dealing with loans, and detailed reference thereto is not needed here. The import of capital by persons who have taken up their residences in the Colony has averaged somewhat over a million a year, and has been a material element in the progress of the Colony, as it has not entailed the export of interest or the repayment of the principal. The capital invested by persons not living in the Colony amounted to £27,256,000, about half of which (£13,000,000) has been introduced by the leading banks, and represents their capital with the deposits received in Great Britain and employed in the Colony. Some five millions represents the capital employed by other investment companies, three millions the mining capital, which of course does not include any of the speculative prices paid for mining shares, but the capital actually brought to the Colony, while some £6,250,000 represents the miscellaneous investments, to a large extent advances on mortgages and investments in real estate in the city of Sydney. The earnings of the investments included in this category amount to £2,210,000 but at least half of this sum represents the returns from mining, chiefly from the silver fields of Broken Hill, which are almost entirely owned outside the Colony.

Details of investments.

The following are the particulars of the investments referred to above, grouped in periods of five years, except the last period, which embraces six years :—

Classification.	1871-75.	1876-80.	1881-85.	1886-91.	1871-91.
	£	£	£	£	£
Capital imported by the Government	2,861,000	5,458,000	16,068,000	14,574,000	38,961,000
Capital introduced by persons taking up their residence in the Colony	2,732,000	5,760,000	8,459,000	5,695,000	22,646,000
Capital invested in the Colony by persons living abroad	245,000*	2,410,000	12,378,000	12,713,000	27,256,000
Total capital introduced	5,348,000	13,628,000	36,905,000	32,982,000	88,863,000

* Capital withdrawn.

Income of absentees.

The figures just given do not cover the entire case. British money was employed in the Colony prior to 1871, but not to any large extent, although no inconsiderable sum was invested in pastoral properties, especially in the Riverina district, by persons residing in other Colonies, chiefly in Victoria. The income derived from the investments last mentioned, and the income of absentees generally, reach some £1,200,000, which, capitalised at 5 per cent., amounts to £24,000,000. The import of money, due to the increase in the public debt from 1871 to the end of 1891, has been estimated at £38,961,000, but the actual debt owed outside the Colony was £46,472,000, so that practically the debt of New South Wales to persons outside its boundaries in excess of the value of property outside the Colony owned by New South Wales residents is as follows :—

	Amount.	Income.
To public creditors	£46,472,000	£1,826,000
,, municipal creditors	1,128,800	50,800
,, private creditors and absentees	51,256,000	3,450,000
	£98,856,800	£5,326,800

Large amount of interest.

The sum required to meet the interest on investments in New South Wales, viz., £5,326,800, is undoubtedly very large, representing as it does £4 11s. 5d. per head of population. A considerable portion of this is really not a burthen on the population, being the result of antecedent production. Thus the mining industry alone pays £1,300,000 as profits and expenses on New South Wales mines owned out of the Colony; but as the income would cease if the mines failed to be productive, this payment stands in a different category to the interest on public debt, for example. Other payments, standing on much the same footing as the earnings of mines, amount to about £1,150,000, leaving the payments to be made to the creditors of the Colony, irrespective of production, approximately £2,876,800.

If the sums ascertained to be invested in the Colony, the income from which is drawn by persons living abroad, be deducted from the gross wealth, the following results will be shown:—

Value of.	Gross value.	Owing to persons non-resident.	Net wealth.
	£	£	£
Public property	181,925,500	46,472,000	135,453,500
Municipal property	7,213,000	1,128,800	6,084,200
Private property	404,148,000	51,256,000	352,892,000
Total	593,286,500	98,856,800	494,429,700

In the foregoing statement allowance has been made for the amount of the public and municipal debt held in the Colony, which has been deducted from the gross amount to obtain the figures in the second column, viz., owing to persons non-resident.

PROBATES.

Increase in value of estates of deceased persons.

The value of the estates in which wills were proved in the Colony, or for which letters of administration were granted, has increased very rapidly. The following are the values of probates and letters of administration granted for 1866 and subsequent periods:—

Year.	No. of Probates and administrations—will annexed.	Amount sworn to.	No. of Letters of Administration.	Amount sworn to.	Total No. of Estates.	Total Amount sworn to.
		£		£		£
1866	266	500,285	160	133,259	426	633,544
1871	285	498,166	190	111,045	475	609,211
1876	511	1,677,972	415	223,189	926	1,901,161
1881	671	2,011,305	526	307,818	1,197	2,319,123
1882	810	3,586,554	589	581,528	1,399	4,168,082
1883	862	3,528,602	613	588,029	1,475	4,116,631
1884	933	3,642,709	648	605,543	1,581	4,248,252
1885	961	3,721,805	659	601,542	1,620	4,323,347
1886	1,026	4,726,918	706	768,628	1,732	5,495,546
1887	961	3,621,874	665	641,426	1,626	4,263,300
1888	998	3,652,963	667	638,295	1,665	4,291,258
1889	1,115	4,317,734	682	473,611	1,797	4,791,345
1890	1,131	6,605,545	680	922,577	1,811	7,528,122
1891	1,192	4,734,228	767	722,568	1,959	5,456,796

Average value of estates.

Two things are plainly noticeable from this table, especially if it be viewed in connection with the subsequent one, viz., that the number of persons leaving property shows a general tendency to increase faster than the population, whilst the average value of estates is also increasing. The average value of estates in the several quinquennial periods, from 1867 to 1891, was as follows:—

Quinquennial Periods.	Average.				
	Number of Wills proved or Administrations granted.	Number of Deaths.	Proportion of Persons dying who left Property.	Value of Estates left by Persons with Property.	Value of Estate per Death.
			Per cent.	£	£
1867–71	438	7,102	6·16	2,510	91
1872–76	736	9,139	8·05	....	....
1877–81	1,102	10,720	10·28	....	....
1882–86	1,561	13,831	11·29	2,863	323
1887–91	1,772	14,631	12·11	2,973	360

Stamp duties.

During 1875 the stamp duties were abolished, and were not re-imposed till 1881. For all the years embraced in the foregoing period the probate returns are incomplete as regards the amount sworn to. For this reason the average value of estates in the periods 1872–76 and 1877–81 cannot be given in the above table.

Value of probates as basis of estimate of wealth.

In former issues of this work the question has been discussed whether the value of estates for which probates or letters of administration were granted could be taken as a basis from which the wealth of the whole community could be determined. The system of estimating the wealth of a community from the probate returns assumes that the average amount of property left by those who die in any year is equal to the average possessed by every member of the population; therefore the wealth of a country per inhabitant in any given year is found by dividing the sum left by persons dying in that year by the number of deaths. The assumption upon which this method of estimating is based is fallacious.

Such estimates not reliable.

Viewed in five-year periods these extraordinary variations, though toned down, are so marked as to quite discredit the estimates. Thus, for the five years ending with 1871, the apparent total wealth was 43 millions, while for the five years—1887–91, this value was 385 millions, a nine-fold increase in twenty years. Again, taking the individual years 1890 and 1891, the value of estates per death in the former year was £529, or a total wealth of £593,464,000, while in 1891, it was only £335, or a total of £390,375,000. The falling-off in the wealth of the Colony, therefore, would appear to be £203,089,000, an absurd reduction, even when taking into consideration the fact of 1891 being a year of pronounced depression. Such extraordinary variations give ample reason for viewing with distrust conclusions based on the probate returns. It has been urged that these returns are useful in determining the amount of wealth belonging to persons residing in a country as distinguished from the wealth which is in the country itself. Such a theory is based on a defective knowledge of the conditions under which probates are granted. So far as this Colony is concerned the probates show, if anything, about the amount of property within the Colony which belongs to the estates of persons whose wills have been proved, quite irrespective of the place where such persons may have resided at the time of their death,—and should correspond with the value obtained by estimating separately all the elements of wealth. The following table shows the number and value of estates on which stamp duties were actually paid during the years 1887–91:—

Estates on which Stamp Duties were paid.

Year.	Under the value of £5,000.		Over £5,000, but under £12,500.		Over £12,500, but under £25,000.		Over £25,000, but under £50,000.		Over the value of £50,000.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
		£		£		£		£		£		£
1887	1,513	1,095,260	59	487,160	25	444,605	10	362,035	13	1,280,765	1,620	3,669,825
1888	1,503	1,092,885	71	578,055	33	632,685	18	627,260	12	1,380,550	1,637	4,311,435
1889	1,572	1,143,005	76	610,040	21	379,995	16	588,765	15	1,566,090	1,700	4,287,895
1890	1,525	1,269,025	59	461,380	34	636,425	11	412,350	17	3,669,605	1,646	6,448,785
1891	1,716	1,245,055	73	594,390	28	512,425	16	506,580	6	717,770	1,839	3,576,220

Number of estates.

Though the values of estates as declared for probate purposes may not be taken as giving an indication of the absolute wealth of New South Wales, the number of estates gives some indication of the distribution of that wealth. The average number of estates on which stamp duties were paid for the five years 1887–91 was 1,689 per annum, and the average value of the estates was £4,458,832, or a value per estate of £2,640. The average number of persons who died during each year of the same period was 14,631, or at the rate of 13·66 to every 1,000 of the mean population. Presuming that wealth is distributed among the living in the same proportion as it was among those on whose estates stamp duties were paid in relation to the total number of the dead, there would have been, at the end of 1891, 124,732 persons with estates under £5,000, 5,416 with property between £5,000 and £12,500, 2,230 who were worth £12,500 to £25,000, 1,115 whose wealth was between £25,000 and £50,000, and 1,075 who enjoyed estates valued at over £50,000. This would leave about 1,030,800 people whose effects were, so to speak, of little or no value, consisting mainly of personal property—chiefly furniture—which is rarely made the subject of formal bequest. Of these unpropertied persons the majority consisted of women and children. Thus the number of male persons below 21, and therefore incapable of making a bequest, was 293,000, and of women and female children, 534,400, or together 827,400. These, deducted from the number given above, 1,030,800, would leave 203,400 being the adult males who do not possess property, compared with 134,500 who are so fortunate. In determining these figures, the fact that not a few women hold property has not been taken into consideration, but if every allowance had been made on this score, no appreciable difference would be made in the conclusion just arrived at. The foregoing figures show that something like 40 per cent. of the adult males are possessed of property which is a much wider distribution than obtains in older countries.

Value of estates.

Wide distribution of property.

LIFE ASSURANCE.

Life Assurance business.

Under the terms of the Census and Industrial Returns Act, the companies transacting life assurance business in the Colony were required to furnish information regarding their business generally, and especially as carried on in New South Wales. From the returns it is found that there are thirteen offices transacting life business in the Colony. Of these four have their head offices in New South Wales, six elsewhere in Australasia, and three in the United States of America. Several British companies uniting life with other classes of assurance have local branches or agencies, but none of these companies accept life risks in the Colony, and returns were therefore not required from them. The dates to which accounts have been rendered are not in all instances identical, as the expediency of adopting in each instance the annual making-up days of the individual offices has been recognised, with a view to the avoidance of unnecessarily burdensome demands upon their clerical staffs. In most instances the returns are to December 31, 1891. Two of the offices are proprietary, and one, though nominally proprietary, is in reality mutual. The remaining ten offices are strictly mutual. It is proper to observe that proprietary offices allow a considerable proportion of profits earned to assurers on the participating scale, and all offices allow the assured the option of joining at non-participatory rates. The magnitude of the interest entrusted to the companies trading in the Colony will be readily gathered from a glance at the following details of their total assets :—

Classification of Assurance Offices.

	£
Loans on mortgage	33,326,487
,, policies	4,106,877
,, personal estate	4,928,716
Debentures, Government Securities, State and Municipal Stocks	36,728,248
Stocks and shares	2,663,141
Freeholds	13,903,898
Leasehold property	109,394
Cash in hand and on deposit	5,824,055
Agency balances and sundry miscellaneous items	2,168,974
	£103,759,790

Assurance funds invested.

With regard to the total amount invested in Government and Municipal securities, it is impossible to distinguish the sum held in New South Wales securities, except in the case of two local offices, which hold debentures to the value of £371,333 presumably stock of the above class. The balance invested in debenture stocks of other colonies amounts to only £35,222 which is exclusive of Australasian stocks, if any, held by the three New York offices, a return of which is not available. The figures taken without qualification may be misleading, as the enormous business of the American companies, taken in the aggregate quite overshadows that of local offices. Omitting, therefore, companies whose head-quarters are not in Australasia, the following are the assets, arranged in the categories as above given :—

	£
Loans on mortgage	9,655,225
Loans on policies	2,853,588
Loans on personal estate	108,463
Government securities, debentures, bonds, stocks, shares, &c.	459,013
Freeholds	1,741,162
Leasehold property	109,394
Cash in hand and on deposit	838,227
Agency balances and sundry miscellaneous items	474,293
	£16,239,365

Details of Assurance business.

The following table will show the average amount of assurance per policy, the ratio of assets to total amount assured, and that of expenses to income of the eleven ordinary companies of this Colony, the Government life office of New Zealand, the assurance companies of the United Kingdom, and of the United States (State of New York) :—

Country.	Average amount of Assurance per policy.	Ratio of Assets to amount assured.	Ratio of Expenses.	
			To premium income.	To total income.
	£	Per cent.	Per cent.	Per cent.
New South Wales	333	21·12	23·91	18·45
New Zealand	240	25·70	24·29	16·23
United Kingdom	457	44·29	14·30	9·20
United States (New York only)	552	21·21	26·04	20·97

Total number of policies.

Owing to the enormous labour which would be caused to the companies by requiring them to separate their New South Wales business in every particular from their total business, as well as the probable inaccuracy of the returns when obtained, the investigation was restricted in this respect to particulars of policies issued and in force. The following is a statement of the policies issued, discontinued, and existing at the dates of making up returns, and refers to business effected in New South Wales only :—

	No.	Total amount assured.	Annual Premium.
		£	£
Policies in force at beginning of year...	99,296	22,167,959	783,787
Policies issued during the year	46,510	3,653,729	132,799
	145,806	25,821,688	916,586
Policies discontinued during the year ..	27,427	2,559,871	94,856
Total policies in force at end of year...	118,379	*23,261,817	821,730

* And annuities, £9,918 per annum.

Industrial policies excluded.

Three companies transact what is termed industrial business, a class of assurance differing very materially in its principles and methods from ordinary life business. Omitting the business of those companies in which no systematic separation has been made of industrial from ordinary assurance, the following figures are obtained :—

	No.	Total amount assured.	Annual premium.
		£	£
Policies in force at beginning of year...	62,013	21,224,748	742,151
Policies issued during the year	9,105	2,663,839	95,725
	71,118	23,888,587	837,876
Policies discontinued during the year	5,377	1,970,124	72,335
Total policies in force at end of year...	65,741	21,918,463	765,541

Average amount of policies.

From the foregoing it will appear that the average amount assured per policy in New South Wales is £333. From other statements the average amount assured for the whole business of the companies (omitting the industrial section) is £517. It is, however, necessary to observe that in the instance of two New York offices the term "whole business" has been used as applying to Australasian policies only, so that to this extent the average drawn may be regarded as open to partial error.

With regard to the average amount assured per policy the following information has been compiled, based on the latest available returns. The figures relating to New Zealand refer to the whole of the companies operating in that Colony, and not to the Government Office only, as in a previous table :—

Country.	Average amount assured per policy.
	£
Australasia	296
New South Wales	333
Victoria	273
Queensland	359
South Australia	263
Western Australia	383
Tasmania	278
New Zealand	285
United Kingdom	457
United States (New York only)	552
Canada	364

Policies discontinued.

The figures relating to policies discontinued during the year are interesting. They refer to New South Wales business only and include the industrial section :—

	Policies discontinued.	Total amount assured.	Annual premium.
		£	£
By death or maturity	1,187	297,177	11,918
,, substitution	38	22,794	1,220
,, surrender, lapse or other causes	26,202	2,232,886	81,444
	27,427	2,552,857	94,582

The lapses are largely amongst industrial companies which, here as elsewhere, expect a high per-centage. Excluding the three partially industrial companies, the figures would show thus :—

	Policies discontinued.	Total amount assured.	Annual premium.
		£	£
By death or maturity	795	286,431	11,404
,, substitution	38	22,794	1,220
,, surrender, lapse or other causes	4,544	1,653,886	59,436
	5,377	1,963,111	72,060

Progress of Life Assurance.

The progress of life companies since their commencing business also shows interesting features. The statement which is now given refers only to New South Wales, and gives the total number of policies issued, with premiums thereon, the total discontinued, the total existing, and the annual takings from the two main sources of income., *i.e.*, premiums and interest. The figures given relate to 10 offices, and exclude these doing partially industrial business :—

	No.	Total amount assured.	Annual premium.
		£	£
Policies issued	124,447	40,827,885	1,470,399
,, discontinued	58,706	18,909,422	704,858
Policies in force	65,741	21,918,463	765,541

The following enumeration indicates the income and outgo of the 13 offices from all sources, industrial business included :—

INCOME.

Premiums—			
Renewal	£15,235,756		
New	5,060,491		
Undivided	10,807		
		£20,307,054	
Purchase of annuities		620,324	
Interest		4,727,935	
Increase in value of investments		133,534	
Other revenue		255,946	
			£26,044,793

OUTGO.

Claims—			
Assurance policies	£6,811,704		
Annuities	410,316		
Bonuses paid in cash	1,297,338		
		£8,519,358	
Surrenders of policies		2,455,730	
Dividends to shareholders		3,564	
Expenses of management—			
Commission on new business	£641,414		
,, renewals	345,704		
,, unseparated	1,702,927		
	2,690,045		
Other expenses	2,225,153		
		£4,915,198	
Government taxes and license fees		206,645	
Depreciation in investments and securities		409,756	
Miscellaneous outlay		24,433	
			£16,534,684

Cost of Assurance business.

There is a remarkable range in the cost at which business has been obtained by the various companies. The proportion of expenses of management to premium income ranges between the extremes of 13·73 and 80·05 per cent. Excluding two offices which have not separated industrial from ordinary assurances, and including one partially industrial office which as regards "income" and "outgo" has divided these sections, the proportion of expenses of management, commissions included, to whole premium income, averages in the case of the 11 offices to 23·913. From this calculation revenue derived from the purchase price of annuities has been excluded and 2 per cent. of annuity income allowed as a deduction from the expenses as an equivalent for the cost of conducting the annuity work.

CURRENCY.

Coins of United Kingdom current.

The coins circulating in Australasia are those of the United Kingdom. Gold is the standard, the silver and copper current are more properly tokens than coins. Gold coins are legal tender to any amount, silver for an amount not exceeding forty shillings, and bronze for one shilling. The standard weight and fineness of each coin are given below. The least current weight of a sovereign is 122·5 Imperial grains, and of a half-sovereign 61·125 grains:—

Standard weight of coins.

Coins in circulation.

Denomination of Coin.		Standard Weight.	Standard Fineness.
		Imperial grains.	
Gold	Sovereign	123·27447	Eleven-twelfths fine gold, one-twelfth alloy, or decimal fineness ·91666.
	Half-sovereign	61·63723	
Silver	Crown	436·36363	Thirty-seven-fortieths fine silver, three-fortieths alloy, or decimal fineness ·925.
	Double Florin	349·09090	
	Half-crown	218·18181	
	Florin	174·54545	
	Shilling	87·27272	
	Sixpence	43·63636	
	Threepence	21·81818	
Bronze	Penny	145·83333	Mixed metal, copper, tin, and zinc.
	Halfpenny	87·50000	

Coins struck at Sydney Mint.

Gold coins are the only ones struck at the Sydney Mint, though silver and bronze of English coinage are also issued. Negotiations have been entered into with the Imperial authorities to secure the right of coining silver as well as gold, and the Governments of New South Wales and Victoria are both pressing their claims, which will most probably be allowed, but as silver is merely a token and not a legal tender coin, the value of the concession is possibly much over-rated.

Weight of gold minted.

The weight of gold sent for coinage from the first opening of the Mint on the 14th May, 1855, to the end of 1891, was 18,705,258 oz., valued at £70,337,829; of this quantity New South Wales produced only 7,558,815 oz., of the value of £28,760,081, the amount from each colony being:—

Colony where gold was produced.	Weight.	Value.
	oz.	£
New South Wales	7,558,815	28,760,081
Queensland	7,106,130	25,458,844
New Zealand	2,249,940	8,880,088
Victoria	1,442,303	5,921,957
South Australia	74,847	265,797
Tasmania	11,805	44,817
Other countries	18,398	63,882
Old coin	243,020	942,363
Total	18,705,258	70,337,829

The foregoing figures are to the close of 1891—in 1892, up to the 30th September, 589,728 oz., valued at £2,088,705, were received by the Sydney Mint, so that the total to the date mentioned was 19,294,986 oz., valued at £72,426,534.

New South Wales and Queensland gold coined at Sydney.

The greater part of the gold won in New South Wales and Queensland, and also part of the produce of New Zealand and South Australia, comes to Sydney for coinage; but by far the larger portion of the gold of the colonies last-mentioned, as well as of the other colonies of the group, goes to Melbourne. The total value of gold raised in Australasia to the end of 1891 amounted to £348,246,119, of which £70,337,829, equivalent to 20·2 per cent., passed through the Mint of this Colony. The value of gold coin and bullion issued up to the end of 1891, was £70,141,468, of which £67,199,000 worth of gold was converted into coin, the value of sovereigns and half-sovereigns being:—

Year.	Sovereigns.	Half-sovereigns.	Total.
	£	£	£
1855 to 1880	43,332,500	2,113,500	45,446,000
1881	1,360,000	31,000	1,391,000
1882	1,298,000	26,000	1,324,000
1883	1,108,000	110,000	1,218,000
1884	1,595,000	....	1,595,000
1885	1,486,000	....	1,486,000
1886	1,667,000	41,000	1,708,000
1887	2,002,000	67,000	2,069,000
1888	2,187,000	....	2,187,000
1889	3.262,000	32,000	3,294,000
1890	2,808,000	....	2,808,000
1891	2,596,000	77,000	2,673,000
Total	64,701,500	2,497,500	67,199,000

Bronze and silver coin issued by Mint.

Bronze coin was first issued from the Mint in 1868, and silver coin in 1879. The respective value of each to the close of the year 1891 being:—Bronze, £36,000; silver, £413,550. The amount of each particular currency issued to the end of 1891 is shown in the following table:—

Year.	Silver Coin.						Bronze Coin.
	Half-crowns and crowns.	Florins.	Shillings.	Six-pences.	Three-pences.	Total.	
	£	£	£	£	£	£	£
1868 to 1880	28,300	22,400	23,900	5,900	7,800	88,300	19,190
1881	14,600	10,600	12,000	3,600	2,700	43,500	710
1882	12,100	11,300	13,800	1,300	4,000	42,500	1,950
1883	11,200	9,300	13,000	2,400	3,700	39,600	1,375
1884	15,000	11,800	11,300	4,300	3,800	46,200	1,765
1885	11,100	7,200	12,450	5,550	7,600	43,900	2,485
1886	2,600	200	5,500	1,450	7,650	17,400	1,095
1887	2,375	700	1,850	500	690	6,115	800
1888	1,425	900	3,250	3,100	2,610	11,285	1,630
1889	7,800	4,000	3,900	2,700	3,975	22,375	1,560
1890	7,500	8,600	9,200	4,500	5,375	35,175	1,460
1891	2,000	1,800	4,100	5,100	4,200	17,200	1,980
Total... £	116,000	88,800	114,250	40,400	54,100	413,550	36,000

Silver coin withdrawn.

The amount of silver coin withdrawn from circulation from 1873, when the Mint first received worn coin, until 1891, was of the nominal value of £121,079. The actual weight after melting was 383,410 oz., and the corresponding weight of new coinage would be 440,288 oz. The loss while the coins were in circulation was therefore 56,878 oz., the average loss being 12·9 per cent.

Coin held by banks.

The amount of coin held by the banks, and in circulation, was smaller during 1891 than in the three previous years, though, as compared with the population, the total has not varied greatly for some years, 1891 perhaps being an exception, as will be seen from the following table :—

Year.	Coin in Banks.	Average. per head.	Coin in private hands.	Average. per head.	Total in Banks and in private hands.	Average. per head.
	£	£ s. d.	£	£ s. d.	£	£ s. d.
1860	1,490,561	4 7 0	1,456,052	4 5 0	2,946,613	8 12 0
1865	1,228,450	3 1 5	1,781,073	4 9 1	3,009,523	7 10 6
1870	1,352,842	2 15 2	1,960,344	4 0 0	3,313,186	6 15 2
1875	2,525,698	4 14 6	2,179,326	4 1 6	4,705,024	8 16 0
1880	3,637,568	4 17 3	2,605,370	3 9 8	6,242,938	8 6 11
1881	2,885,890	3 13 10	3,104,397	3 19 7	5,990,287	7 13 5
1882	2,672,799	3 5 7	3,128,415	3 16 9	5,801,214	7 2 4
1883	2,861,980	3 6 5	2,989,137	3 9 5	5,851,117	6 15 10
1884	3,863,873	4 5 4	2,988,744	3 6 0	6,852,617	7 11 4
1885	4,069,840	4 5 8	3,250,082	3 8 5	7,319,922	7 14 1
1886	4,439,742	4 9 9	3,361,904	3 7 11	7,801,646	7 17 8
1887	5,108,996	5 0 2	3,745,980	3 13 5	8,854,976	8 13 7
1888	5,060,759	4 16 3	3,936,589	3 14 11	8,997,348	8 11 2
1889	5,161,011	4 15 5	3,874,058	3 11 8	9,035,069	8 7 1
1890	5,810,568	5 3 7	3,915,260	3 9 9	9,725,828	8 13 4
1891	4,861,310	4 3 5	4,012,493	3 8 10	8,873,803	7 12 3

Stock of gold and silver.

The stock of gold and silver in private hands, in relation to the population, showed a slight decrease during 1891 compared with the previous year; there is evidently a tendency to reduce the quantity of coin needed for the ordinary business of exchange. The spread of the banking system is generally attended with a diminution of the amount of coin required for the use of business, and the decrease in the supply of coin per head points to the extension of banking facilities. The quantity of coin in the Colony both reserved in banks and in circulation amounts to about £7 12s. 3d. per head, a larger sum than in any other country except France; if, however, a comparison be made of the quantity of currency, apart from bank reserves, but including paper money, New South Wales is exceeded by France, Belgium, the Netherlands, and the United States. The following table shows the total amount of circulation and the average per inhabitant in some of the principal countries. The extraordinary variations in the requirements arise

Amount of currency.

from the diverse modes of transacting business which obtain, and the poverty of some of the countries enumerated :—

Country.	Active Currency.			Per Inhabitant.
	Coin.	Paper.	Total.	
	£	£	£	£ s. d.
Great Britain	96,000,000	39,000,000	135,000,000	3 10 8
France	227,000,000	115,000,000	342,000,000	8 16 5
Germany	108,000,000	71,000,000	179,000,000	3 13 8
Russia	20,000,000	123,000,000	143,000,000	1 11 1
Austria	5,500,000	76,000,000	81,500,000	2 0 8
Italy	19,000,000	57,000,000	76,000,000	2 10 2
Spain	33,500,000	30,000,000	63,500,000	3 12 2
Holland	7,400,000	17,000,000	24,400,000	5 6 1
Belgium	17,600,000	15,000,000	32,600,000	5 6 10
Switzerland	2,100,000	6,000,000	8,000,000	2 14 0
United States	193,700,000	208,000,000	401,700,000	6 8 4
Canada	2,600,000	6,000,000	8,600,000	1 15 8
India	168,000,000	12,000,000	180,000,000	0 17 2
Cape Colony	5,400,000	1,000,000	6,400,000	4 9 7
New South Wales	4,012,000	1,789,000	5,801,000	4 19 7

MOVEMENTS OF GOLD.

Import and export of Gold.

Since the discovery of gold in the year 1851 large quantities of that metal—in the form of coin as well as bullion—have been exported from the Australasian Colonies every year. The returns of gold imported and exported from each of the Colonies, calculated for ten-year periods from the year 1851 to the end of 1891, are given herewith. The tables also show the amount by which the exports have exceeded the imports in the various Colonies, or *vice versa*, as the case may be.

Producers the largest exporters.

The largest exporters of gold, it will be found, are the largest producers, as Victoria, New Zealand, and Queensland. The other Colonies now produce very little more than suffices to meet their local requirements. The returns of the gold imports and exports for New South Wales, it must be remembered, are swollen by large quantities of Queensland gold, which is simply sent to Sydney to be minted, and then exported in the shape of coin. The movements for each colony were :—

Colony.	1851-60.		1861-70.		1871-80.		1881-91.		1851-1891.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
	£	£	£	£	£	£	£	£	£	£
New South Wales	3,874,764	12,211,831	12,148,037	25,804,687	13,308,140	18,557,134	20,452,433	22,000,762	49,783,374	78,574,414
Victoria	4,349,457	90,691,591	11,821,815	74,430,857	10,868,837	48,091,469	8,523,688	33,233,679	35,563,797	246,447,596
Queensland	......	....	367,025	2,135,600	1,383,822	10,813,959	2,566,707	16,165,676	4,317,554	29,115,235
South Australia	1,091,012	2,991,967	882,149	486,516	1,622,202	521,893	2,422,807	1,707,973	6,018,170	5,708,349
Western Australia	......	....	19,310	38,896	39,710	1,710	332,654	294,516	391,674	335,122
Tasmania	......	843,029	59,500	17,930	402,446	561,142	731,958	1,625,725	1,193,904	3,047,826
New Zealand	170,328	219,309	1,727,925	22,022,747	2,312,327	16,527,470	2,840,009	11,427,212	7,050,589	50,196,738
Australasia	9,485,561	106,957,727	27,025,761	124,937,233	29,937,484	95,074,777	37,870,256	86,455,543	104,319,062	413,425,280

The excess of exports of gold for each colony during each of the periods shown was as follows :—

Colony.	1851-60.	1861-70.	1871-80.	1881-91.	1851-1891.
	£	£	£	£	£
New South Wales........	8,337,067	13,656,650	5,248,994	1,548,329	28,791,040
Victoria	86,342,134	62,609,042	37,222,632	24,709,991	210,883,799
Queensland..............	....	1,768,575	9,430,137	13,598,969	24,797,681
South Australia	1,900,955	*395,633	*1,100,309	*714,834	*309,821
Western Australia	....	19,586	*38,000	*38,138	*56,552
Tasmania	843,029	*41,570	158,696	893,767	1,853,922
New Zealand	48,981	20,294,822	14,215,143	8,587,203	43,146,149
Total excess of exports	97,472,166	97,911,472	65,137,293	48,585,287	309,106,218
Average per annum ..	9,747,217	9,791,147	6,513,729	4,416,844	7,539,176

* Excess of Imports.

BANKING.

Revision of banking legislation necessary.

The laws relating to banks and banking at present in force are susceptible of great improvement; and the recent failure of many monetary institutions posing as banks has directed attention to the strong necessity for entirely revising the conditions under which deposits may be taken from the general public.

Returns required to be furnished.

All institutions transacting the business of banking are required by law to furnish quarterly statements of their assets and liabilities in a specified form, and from these statements the tables in this chapter relating to years previous to 1891 have been compiled. The returns furnished by the banks, though in compliance with the laws of the Colony, are by no means so satisfactory as could be desired, being somewhat out of date, and cannot be taken without question as indicating the stability or otherwise of the banks, for an institution may show, as did the old Oriental Bank Corporation, a large surplus of assets over liabilities in the colonies, and yet be on the brink of insolvency by reason of its operations elsewhere. Other defects in the returns will be pointed out when the figures are being specifically dealt with. The information obtained under the authority of the Census and Industrial Returns Act is of a very different character, and may be taken as actually illustrating the position of the chartered banks during the first half of the year 1892.

Banks operating in N. S. Wales.

Of the fourteen banks of issue operating in New South Wales, four have their head offices in Sydney, three in Melbourne, one in Brisbane, one in Townsville, and five in London. Of the four local banks, three have branches outside New South Wales, and the fourth confines its operations within the limits of the Colony.

Nominal capital.

The nominal capital of these banks amounts to £27,100,000, and the subscribed capital to £19,182,660. The paid-up capital is £12,383,627, and the reserved profits amount to £7,574,400, making the total of shareholders' capital £19,958,027. The use of this large sum, however, is not confined to New South Wales, some £5,512,671 being invested in the other colonies or retained in London, leaving the actual sum invested in the Colony £14,445,356.

The capital, profits, and other information regarding each bank of issue operating in the Colony will be found hereunder:—

Banks.	Capital paid up.	Liability on Shares.	Rate per cent. of Annual Dividend.	Reserve Fund and Undivided Profits at time of declaring last Dividend.
Head Office in New South Wales—	£	£	£	£
New South Wales	1,250,000	1,250,000	17½	980,000
Commercial of Sydney	600,000	600,000	25	831,068
Australian Joint Stock	704,394	860,926	15	517,660
City	280,000	720,000	10	188,975
Head Office in Victoria—				
Commercial of Australia	1,200,000	1,720,000	17½	1,164,131
Federal	400,000	400,000	9	125,000
National of Australasia	1,000,000	1,500,000	15	670,000
Head Office in Queensland—				
Queensland National	800,000	800,000	10	500,480
North Queensland	249,233	250,767	5	3,000
Head Office in London—				
Australasia	1,600,000	1,600,000	12½	800,000
Union of Australasia	1,500,000	3,000,000	12	1,101,056
London Chartered of Australia	1,000,000	1,000,000	8	320,000
English, Scottish, and Australian Chartered	900,000	900,000	8	353,030
New Zealand	900,000	1,500,000	5	20,000
Total £	12,383,627	16,101,693	12·6	7,574,400

Dividends.

The dividends shown in the foregoing table amounted, during the year, to £1,564,100. This large sum was not, however, all earned in New South Wales, as, of the total capital, only £14,445,356 was employed in the Colony, and probably earned £665,877.

Enormous development of banking.

Considering the population of these colonies the banking operations of Australasia have attained enormous development. The following table from Mulhall's Dictionary shows the capital employed in banking, and the amount of deposits in some of the principal countries. The figures regarding Australasia are for 1892:—

Country.	Million £.			Amount per Inhabitant.
	Paid up Capital and Reserves.	Deposits.	Total.	
				£
United Kingdom	284	626	910	24
France	140	128	268	7
Germany	85	146	231	5
Russia	42	64	106	1
Austria	45	102	147	4
Italy	25	83	108	4
Spain	31	16	47	3
Portugal	6	4	10	2
Belgium	11	19	30	5
Holland	14	6	20	4
Sweden	9	15	24	5
Norway	5	1	6	3
Denmark	2	21	23	12
Switzerland	5	12	17	6
Cape Colony	2	7	9	6
Argentina	12	17	29	8
Uruguay	3	5	8	12
United States	270	760	1,030	16
Canada	13	27	40	8
Australasia	25	112	137	35

Extent of operations.

The magnitude of the operations of these institutions may be gathered from the following statement, which shows the aggregate assets and liabilities of the fourteen banks named in the previous table, and which are according to the sworn returns under the aforementioned Act. With one exception, the accounts are brought up to the year 1892. The transactions recorded refer to business effected within the limits of the Colony:—

Classification.	Amount.
Liabilities:—	£
Notes in circulation	1,474,472
Bills and drafts payable	337,227
Balances due to other Banks	66,637
Deposits:—	
Government, not bearing interest	351,055
Other, bearing interest	25,956,734
,, not bearing interest	7,438,718
Other liabilities	1,359,605
Total £	36,984,448
Assets:—	£
Promissory Notes and Bills discounted	5,112,977
Advances on current accounts	34,962,013
Advances on property held by Banks as mortgagees in possession	1,878,428
Notes of other Banks	129,594
Bills and drafts of other Banks	101,189
Balances due from other Banks	425,187
New South Wales Government securities	1,055,800
Properties discharged from equity of redemption	660,891
Coin	5,267,389
Bullion	50,505
Assets not specified	705
Bank premises	1,785,126
Total £	51,429,804

Assets and liabilities.

The assets and liabilities for 1860 and subsequent years are given in the subjoined table. Prior to 1892, the figures given for each year are the averages for those periods, while those of 1892 are the returns at date of balancing. The liabilities in every case are exclusive of capital and reserve funds. During the early part of 1892, a London bank transacting business in the Colony suspended payment, while a South Australian bank transferred its business to the Union Bank of Australia, thus reducing the number of banks of issue operating in the Colony to fourteen:—

Year.	Assets.	Liabilities.	Surplus Assets.
	£	£	£
1860	8,929,100	6,480,641	2,448,459
1865	10,947,162	6,962,314	3,984,848
1870	10,945,915	7,198,680	3,747,235
1875	18,318,311	14,499,398	3,818,913
1880	24,398,813	19,335,229	5,063,584
1881	26,481,987	21,426,126	5,055,861
1882	30,624,731	24,393,750	6,230,981
1883	32,580,005	25,828,248	6,751,757
1884	35,261,346	27,480,291	7,781,055
1885	37,815,576	29,845,622	7,969,954
1886	39,805,308	30,378,358	9,426,950
1887	42,268,720	31,831,499	10,437,221
1888	44,971,057	33,035,061	11,935,996
1889	48,914,994	34,593,165	14,321,829
1890	....	36,828,633	....
1891	....	37,005,934	....
1892	51,429,804	36,984,448	14,445,356

Misleading returns.

The assets for 1890 and 1891 have been omitted, as the quarterly returns of two of the leading local banks are misleading, inasmuch as the institutions referred to have been permitted to include amongst their assets the advances made to their branches. This is not only contrary to law, but actually misleading, as not only have the banks taken credit for the advances so made, but also for the assets of the branches on which the money obtained from the head office was advanced. Comparisons with these years would therefore be meaningless. The returns of liabilities are open to no such objection.

Deposits in banks of issue.

A very complete return of the deposits in banks of issue was furnished under the authority of the special Act. The amount on fixed deposit and at credit of current account, exclusive of

£351,055 deposited by the Government, was subdivided into groups, and the number of depositors in each class was also obtained. The returns show the following results:—

Classification of Deposits.	On Fixed Deposit.		At Credit of Current Account.	
	Number of Depositors.	Amount of Deposits.	Number of Depositors.	Amount of Deposits.
		£		£
Not exceeding £300	26,003	3,419,655	99,587	3,096,163
Above £300 and not above £500	4,742	1,984,384	1,883	724,849
,, £500 ,, £1,000	4,277	3,287,072	1,335	903,655
,, £1,000 ,, £2,000	2,031	2,984,021	570	774,293
,, £2,000 ,, £3,000	705	1,791,279	153	362,608
,, £3,000 ,, £4,000	333	1,193,864	72	246,807
,, £4,000 ,, £5,000	264	1,250,061	35	159,892
,, £5,000 ,, £10,000	381	2,815,833	63	442,221
,, £10,000 ,, £15,000	110	1,364,676	22	268,247
,, £15,000 ,, £20,000	43	721,634	4	72,562
,, £20,000	106	5,039,648	13	492,028
Total	38,995	25,852,127	103,737	7,543,325

Amount of deposits.

The average yearly amount of money deposited in the banks in 1860 and following periods is given in the subsequent table. Prior to 1876 no distinction was made between deposits bearing interest and those at call:—

Year.	Deposits bearing Interest.	Deposits not bearing Interest.	Total Deposits.	Average Yearly Interest on Deposits for Twelve Months.
	£	£	£	
1860	....	....	5,261,196	5
1865	....	....	5,816,014	6
1870	....	....	6,403,525	5
1875	....	....	13,132,772	5¼
1876	9,563,608	5,146,536	14,710,144	5
1880	12,209,781	5,683,870	17,893,651	5
1881	11,869,979	7,719,236	19,589,215	3¾
1882	13,772,826	8,310,054	22,082,880	4
1883	16,302,407	7,158,975	23,461,382	6
1884	17,738,445	7,453,914	25,192,359	5½
1885	18,387,705	8,819,979	27,207,684	5
1886	18,974,984	8,355,255	27,330,239	5½
1887	20,162,493	8,870,037	29,032,530	5½
1888	20,382,990	10,436,559	30,819,549	4½
1889	22,925,549	9,830,056	32,755,605	5
1890	25,114,127	9,932,310	35,046,437	4½
1891	25,567,893	9,586,205	35,154,098	4¾
1892	25,956,734	7,789,773	33,746,507	4½

Increase of interest bearing deposits.

The most striking feature of the table is the rapid advance of interest bearing deposits, which, in 1892, had reached the large sum of £25,956,734, whereas the amount ten years previously was only £13,772,826. The deposits at call amounted to £7,789,773 in 1892, as against £8,310,054 in 1882.

Banking Act of 1840.

As already explained, the quarterly statements of the banks are made pursuant to the Act 4 Victoria No. 13, passed in 1840 The classification both of assets and liabilities required by the Schedule to the Act is obsolete; thus, under the term deposits not bearing interest the banks are accustomed to return interest accrued, and all debts due by them other than deposits at interest, notes, and bills, the result being that in this respect the returns are misleading. It unfortunately happens, however, that there is now no means of correcting the figures. That the over statement is considerable will appear from the fact that the census returns show deposits not bearing interest as £7,789,773, as compared with a total in the quarterly statements for the first half-year of 1892 of £9,363,727.

Current Accounts.

From a table on the previous page the amount to the credit of current accounts, including Government deposits, is found to be £7,894,380, which is slightly larger than the amount returned as not bearing interest; it is evident, therefore, that some current accounts bear interest, which is a very unusual concession on the part of the banks to the general public, although for some years 4 per cent. per annum was allowed on Government loan moneys placed at current account.

British money invested in Australia.

Attracted by the high rate of interest on deposits allowed by the banks in 1887 large sums of British money were forwarded to Australia for investment. This influx was soon felt in the money market, for in the year 1888 the interest declined to an average of 4½ per cent., a rate lower than any prevailing since 1882. In the earlier months of 1889 a slight reaction took place, but towards the end of the year the interest declined to the rate of the previous year, at which point it remained until about July, 1890, when it rose to 5 per cent., and continued at this rate till April, 1892, after which date it was reduced to 4½ per cent. on deposits fixed for twelve months.

Rates of Interest.

The interest allowed to depositors by banks of issue during the first three months of 1892 was 3 per cent. for deposits fixed for three months, 4 per cent. for six months, and 5 per cent. for twelve months, whilst during the last eight months of that year it was in every instance ½ per cent. lower. The Savings Bank of New South Wales gave interest at the rate of 4 per cent. on accounts closed during the year, and 5 per cent. on accounts open on the 31st December. The ruling rate during the year for Post Office Banks was 4 per cent. The average rates allowed by banks for 1860 and subsequent periods were as follow:—

Year.	3 Months.	6 Months.	12 Months.	Year.	3 Months.	6 Months,	12 Months.
	per cent.	per cent.	per cent.		per cent.	per cent.	per cent.
1860	3	4	5	1885	3	4	5
1865	4	5	6	1886	3½	4½	5½
1870	3	4	5	1887	3½	4½	5½
1875	3½	4½	5¼	1888	2½	3½	4½
1880	3	4	5	1889	3	4	5
1881	2	2¾	3¾	1890	2½	3½	4½
1882	2	3	4	1891	2¾	3¾	4¾
1883	4	5	6	1892	2½	3½	4½
1884	3½	4½	5½				

Reserves compared with liabilities.

The proportion of metallic reserves which banking institutions must habitually keep in stock is not fixed by any enactment. Compared with the total liabilities, and with deposits at call and note circulation, the quantity of coin and bullion has varied very considerably from year to year, as the following statement shows :—

Year.	Coin.	Bullion.	Total.	Per cent. of Metallic Reserves to total Liabilities.	Per cent. to deposit at call and note circulation.
	£	£	£		
1860	1,330,877	45,936	1,376,813	21·8	*
1865	1,265,897	104,282	1,370,179	19·7	*
1870	1,331,223	69,902	1,401,125	19·5	*
1875	2,476,456	112,319	2,588,775	17·8	*
1880	3,373,618	73,651	3,447,269	17·8	50·1
1881	3,594,914	80,068	3,674,982	17·1	40·3
1882	3,022,159	74,308	3,096,467	12·7	31·2
1883	2,798,536	80,018	2,878,554	11·1	32·6
1884	3,559,859	61,223	3,621,082	13·2	39·8
1885	4,171,043	62,066	4,233,109	14·2	40·2
1886	3,958,238	66,243	4,024,481	13·2	40·3
1887	4,870,315	65,187	4,935,502	15·5	47·5
1888	5,461,393	59,608	5,521,001	16·7	45·9
1889	4,997,629	70,528	5,068,157	14·6	44·8
1890	5,575,058	83,999	5,659,057	15·4	49·5
1891	5,274,000	83,107	5,357,107	14·5	47·9
1892	5,267,389	50,505	5,317,894	14·4	57·4

* Amount of deposits at call unobtainable.

Reserves comparatively heavy.

Compared with the total amount of currency, the reserves held by Australasian Banks are proportionately heavier than those of any other country. In New South Wales the bank reserve fully equals the whole of the active circulation both of coin and paper ; much the same conditions exist in the neighbouring colonies. The only European country approaching this proportion, is the Netherlands, where the bank reserves equal about 40 per cent. of the active currency of the country. The following table gives the total value of coin and paper currency, both active and reserved in use in the principal countries of the world.

Currency compared with other countries.

It will be seen from the figures below that New South Wales has a larger currency per inhabitant than any of the countries mentioned, France alone excepted :—

Country.	Active and Reserved Currency.			Per Inhabitant.		
	Coin.	Paper.	Total.			
	£	£	£	£	s.	d.
Great Britain	124,000,000	39,000,000	163,000,000	4	8	0
France	328,000,000	115,000,000	443,000,000	11	16	0
Germany	167,000,000	71,000,000	238,000,000	5	0	0
Russia	53,000,000	123,000,000	176,000,000	2	2	0
Austria	27,000,000	76,000,000	103,000,000	2	12	0
Italy..................	33,000,000	57,000,000	90,000,000	3	0	0
Spain	43,000,000	30,000,000	73,000,000	4	4	0
Portugal	11,000,000	30,000,000	12,000,000	2	14	0
Scandinavia	8,000,000	13,000,000	21,000,000	2	16	0
Holland	18,000,000	17,000,000	35,000,000	7	14	0
Belgium	22,000,000	15,000,000	37,000,000	6	2	0
Switzerland	6,000,000	6,000,000	12,000,000	4	0	0
United States......	228,000,000	208,000,000	436,000,000	7	0	0
Canada	4,000,000	6,000,000	10,000,000	2	0	0
Japan	28,000,000	26,000,000	54,000,000	1	8	0
China	150,000,000	....	150,000,000	0	10	0
India	180,000,000	12,000,000	192,000,000	1	0	0
Java..................	18,000,000	....	18,000,000	0	18	0
Cape Colony	7,000,000	1,000,000	8,000,000	6	0	0
Egypt	31,000,000	....	31,000,000	6	4	0
Algeria	5,000,000	3,000,000	8,000,000	2	0	0
New South Wales	8,874,000	1,812,000	10,686,000	9	3	5

Advances and deposits.

A comparison of advances and deposits presents some interesting features, and is given below. The period embraced is from 1860 to 1892, some of the earlier intervening years, however, as in previous tables being omitted :—

Year.	Advances.	Total Deposits.	Ratio of Advances to Deposits.	Amount of advances per Inhabitant.
	£	£	Per cent.	£ s.
1860	5,992,436	5,261,196	113·9	17 10
1865	7,151,340	5,816,014	122·9	17 18
1870	7,907,854	6,403,525	123·5	16 3
1875	11,770,185	13,132,772	89·6	20 3
1880	16,661,815	17,893,651	93·1	22 17
1881	19,038,386	19,589,215	97·2	24 18
1882	23,517,046	22,082,880	106·5	29 9
1883	25,894,669	23,461,382	110·4	30 18
1884	27,479,142	25,192,359	109·1	31 2
1885	30,556,628	27,207,684	112·3	32 19
1886	32,527,431	27,330,239	119·0	33 11
1887	33,352,179	29,032,530	114·9	33 4
1888	35,870,485	30,819,549	116·4	34 13
1889	39,956,031	32,755,605	122·0	37 9
1890	41,623,049	35,046,437	118·8	37 15
1891	43,291,105	35,154,098	123·2	37 17
1892	41,953,418	33,746,507	124·3	35 14

Utility of banking system.

The useful purpose which the banking system serves may be readily realized from the foregoing statement. The period extending from 1875 right on to 1885 was, on the whole, one of trade prosperity, and throughout those years the ratio of advances to deposits ranged between 90 and 112 per cent. Since 1885, New South Wales, in common with the other Colonies, has suffered more or less from depression, and the ratio of advances to deposits has stood considerably higher, viz., from 115 to 124 per cent.

Rates of Discount.

The following table gives the discount charged by the banks for unexceptional bills. The table covers a period of twenty-one years, during which the rates varied from 5½ to 7 per cent. for bills under three months, from 6¼ to 8 per cent. for four months, and from 7½ to 9 per cent. for bills with a currency over four months. In the last column of the statement the discount rates of the Bank of England during the same period are given :—

Year.	Discount on Local Bills.			Average annual discount rate, Bank of England.
	Under 3 Months.	3 to 4 Months.	Over 4 Months.	
	Per cent.	Per cent.	Per cent.	Per cent.
1872	$5\frac{1}{2}$	$6\frac{1}{2}$	$7\frac{1}{2}$	$4\frac{1}{2}$
1873	$5\frac{1}{2}$	$6\frac{1}{4}$	$7\frac{1}{2}$	5
1874	7	8	9	$3\frac{4}{5}$
1875	7	8	9	$3\frac{1}{3}$
1876	7	8	9	$3\frac{1}{2}$
1877	7	8	9	$3\frac{2}{5}$
1878	7	8	9	$3\frac{1}{2}$
1879	7	8	9	$2\frac{9}{10}$
1880	7	8	9	$2\frac{7}{10}$
1881	6	7	8	$3\frac{1}{2}$
1882	6	7	8	$4\frac{1}{2}$
1883	7	8	9	$3\frac{1}{2}$
1884	$6\frac{1}{2}$	$7\frac{1}{2}$	$8\frac{1}{2}$	$3\frac{2}{7}$
1885	6	7	8	3
1886	$6\frac{1}{2}$	$7\frac{1}{2}$	$8\frac{1}{2}$	$3\frac{2}{7}$
1887	$6\frac{1}{2}$	$7\frac{1}{2}$	$8\frac{1}{2}$	$3\frac{1}{7}$
1888	$6\frac{1}{2}$	$7\frac{1}{2}$	$8\frac{1}{2}$	$3\frac{1}{2}$
1889	$6\frac{1}{2}$	$7\frac{1}{2}$	$8\frac{1}{2}$	$3\frac{1}{2}$
1890	$6\frac{1}{2}$	$7\frac{1}{4}$	$8\frac{1}{4}$	$4\frac{7}{12}$
1891	7	$7\frac{1}{2}$	$7\frac{1}{2}$	$3\frac{9}{13}$
1892	7	8	9	$2\frac{4}{5}$

Note circulation of Banks.

Banks trading under act of incorporation are allowed a note circulation equal to the amount of their paid-up capital and the coin and bullion in store. The banks have in no instance availed themselves to the full extent of their privilege in this regard; indeed, if they were so disposed, such an issue of notes would be impossible, as the currency required for the business of the Colony is scarcely more than the value of gold retained in the vaults of the banks, and at the same time there is a marked disposition on the part of the general public to use gold in preference to notes for their ordinary transactions. The notes current are not a legal tender, a very necessary condition, as in the present state of the law there is nothing to prevent any company or person issuing notes, provided they can be got into circulation. Indeed, it would appear that the issue of paper circulation was contemplated by the

Companies Act, since it makes notes a first charge on such in the event of companies being wound up. It will be seen from the following statement that the issue of paper by the banks has not varied much during the last eleven years. :—

Year.	Notes in Circulation.	Bills in Circulation.	Total.	Average per Inhabitant
	£	£	£	£
1860	936,544	40,249	976,793	2·85
1865	743,877	42,683	786,560	1·97
1870	688,329	50,406	738,735	1·51
1875	1,080,086	34,811	1,114,897	1·91
1880	1,173,663	45,229	1,218,892	1·67
1881	1,390,376	52,687	1,443,063	1·89
1882	1,614,191	57,487	1,671,678	2·09
1883	1,677,146	64,596	1,741,742	2·08
1884	1,644,469	60,443	1,704,912	1·93
1885	1,714,095	55,300	1,769,395	1·91
1886	1,621,090	60,827	1,681,917	1·73
1887	1,526,096	64,146	1,590,242	1·58
1888	1,591,500	84,111	1,675,611	1·62
1889	1,489,153	96,459	1,585,612	1·49
1890	1,503,404	119,938	1,623,342	1·47
1891	1,596,761	139,815	1,736,576	1·52
1892	1,474,472	337,227	1,811,699	1·55

Large sums deposited in Banks.

In the next table is given the amount of deposits at the end of certain years, commencing with 1860, in the Chartered Banks, the Savings Bank of New South Wales, and Post Office banks and Building and Investment Companies. The increase has been singularly rapid, not only absolutely, but also as compared with the increase in population. During the period of the thirty-two years embraced in the table, the deposits increased from £5,721,208 to £43,674,618, the rate per head advancing from £16 8s. 3d. to £37 9s. 7d.

Building and Investment Societies.

Prior to 1887, no returns of building and investment societies were received. The amount under each head on December 31, was as follows:—

Year.	Deposits.						
	In Banks of issue.	In Savings Banks.	In Building Societies.	Total.	Amount per head of Population.		
	£	£	£	£	£	s.	d.
1860	5,164,011	557,197	....	5,721,208	16	8	3
1865	5,827,098	744,228	....	6,571,326	16	1	3
1870	6,107,999	936,465	....	7,044,464	14	2	6
1875	13,650,892	1,649,872	....	15,300,764	25	14	11
1880	17,883,024	2,075,856	....	19,958,880	26	13	8
1881	20,308,017	2,398,703	....	22,706,720	29	1	0
1882	22,544,549	3,015,095	....	25,559,644	31	7	2
1883	23,739,134	3,005,838	....	26,744,972	31	1	0
1884	26,250,420	3,178,280	....	29,428,700	32	10	4
1885	26,709,386	3,488,550	....	30,197,936	31	16	0
1886	28,428,253	3,504,803	....	31,933,056	32	5	6
1887	29,253,864	3,675,893	1,949,012	34,878,769	34	3	8
1888	31,917,311	4,037,675	2,442,065	38,397,051	36	10	7
1889	33,777,143	4,280,083	2,599,272	40,656,498	37	11	7
1890	35,460,118	4,730,469	3,199,554	43,390,141	38	13	6
1891	35,659,690	5,342,135	2,672,793	43,674,618	37	9	7

Savings Banks.

During the year 1891 there was an increase in the savings banks, of depositors, to the number of 14,600, and in deposits to the extent of £611,666; part of this increase shown is due to interest earned during the year, and part to the extension of the Post Office system, under which there was an addition of over 11,208 depositors, while the total deposits showed an increase of £277,558 over the preceding year. The failure of the many so-called Land Banks was not without effect in forcing depositors, who were fortunate enough to withdraw their money before the institutions closed their doors, to seek others, wherein to place their capital with something like the certainty of being able to obtain it again when needed. By comparing the figures giving the amount deposited per inhabitant for the different years, the increase will be found to be proportionately greater than that of the population. The number of depositors at the close of the last two years and the amount to their credit was :—

Banks.	1890.		1891.	
	Depositors.	Amount.	Depositors.	Amount.
		£		£
Savings Bank of New South Wales	60,514	2,854,564	63,906	3,188,672
Post Office Banks ...	83,312	1,875,905	94,520	2,153,463
Total	143,826	4,730,469	158,426	5,342,135

Savings Bank Deposits.

Of the total deposits in the Savings Bank of New South Wales, 33,576 were for amounts of £20 and under, averaging £5 2s. 5d. each; 10,140 were sums between £20 and £50, averaging each £32 7s. 6d.; 7,975 were between £50 and £100, averaging each £70 18s. 4d.; 8,674 were between £100 and £200, averaging £132 14s. 6d. each; 3,281 were between £200 and £300, averaging £214 4s. 4d.; and 260 over £300, averaging £1,033 10s. 1d. each. It is hardly to be supposed that these last were individual deposits; they probably included the sums lodged by the various penny banks, hospitals, and other public institutions, as no interest is allowed for sums deposited over £200, except those placed by the aforementioned institutions.

Stability of N. S. Wales Savings Bank.

The Savings Bank of New South Wales yearly gives ample proof in the published statements of its financial soundness, and has ample reserves to meet every liability. The stability of this institution was, however, questioned by a portion of the depositors on February 10, 1892, when a run took place. The bank promptly met all demands made, by gold, and the panic subsided as quickly as it arose. During the scare deposits to the amount of £124,000 were paid over the counter, and in addition to this amount, £13,119 were paid by the banks of issue in the interests of the

Savings Bank, making a total of £137,119 withdrawn by depositors.

Land and Building Societies.

Besides the chartered banks and those under Government guarantee, as already mentioned, there are banking, land, building and investment companies, which receive money on deposit. The sworn returns of building and investment societies, like those of the banks of issue, are anything but satisfactory, and under present conditions it is impossible for the general public, even after scrutinising the sworn returns, to distinguish those that are trading on sound lines from those that are purely speculative. Matters are still worse as regards private companies, as no statute is in existence compelling them to make a statement of their business transactions, notwithstanding that they receive money on deposit from the general public.

Panic among Building Societies.

Prior to August, 1891, these seemed to be in a flourishing condition, large dividends being annually paid, although heavy rates were paid on money deposited with them. Nothing had occurred to undermine public confidence in their stability till the date mentioned, when three of these institutions suddenly suspended payment, and were followed within a short time by several others, so that by the end of 1892, no less than twenty-three societies suspended payment, fifteen of which have gone into liquidation, and the remaining eight are now carrying on their business under the provisions of the "Joint Stock Companies Arrangement Act of 1891," which was passed to afford relief to *bonâ fide* institutions which, through no fault of their own, became embarrassed. Statistics were obtained of the operations of thirty-one of these companies, and it would appear that they had at the middle of 1892 assets to the extent of £9,235,110 against liabilities of £5,217,032, showing a nominal surplus of £4,018,078. Their paid-up capital amounted to £3,489,486 and reserved profits £1,065,443—in all, £4,554,929. It will appear from the accompanying statement which refers also to trading or commercial companies that these companies held land to the extent of £4,929,926 at the middle of 1892, their other assets, part of which represents lands sold, but not paid for, amounting to £4,305,184 :—

Liabilities.	£	Assets.	£
Bills in circulation	15,635	Coin	1,598
Balances due to other Banks	512,034	Landed property	4,929,926
Deposits not bearing interest	48,051	Notes and bills of other banks	223
Deposits bearing interest	2,624,742	Balances due from other banks	30,015
Other liabilities	2,016,570	Notes and bills discounted, &c.	3,669,580
		Other assets	603,768
Total liabilities	£5,217,032	Total assets	£9,235,110

Excess of assets over liabilities	£4,018,078
Capital paid up	£3,489,486
Reserved profits	£1,065,443
Number of Societies making returns	31

BANKRUPTCY.

Bankruptcy Act.

The present Bankruptcy Act came into force in January, 1888, superseding a system which made insolvency a very easy matter. It was expected that the new Act would give a healthier tone to trade, and decrease the number of cases in which debtors would have recourse to law to be relieved of their engagements. The result anticipated has in no wise been realised, and bankruptcies are now just as numerous as formerly. Traders have, probably, at length discovered that excessive competition and undue credit in the past is largely responsible for the present numerous failures, and not the facilities which the Bankruptcy Act provides. The few years during which the present Act has been in force have disclosed various weaknesses, and to deal with these an amending Bill has been drafted, and is now being dealt with by the Legislature.

Sequestrations during 1891.

During 1891 the total number of sequestrations was 1,189, the liabilities according to the bankrupts' schedules were £989,778, and the assets amounted to £454,211, representing a deficiency of £535,567. It must be borne in mind, however, that the figures in bankrupts' schedules, especially those relating to assets, are to be accepted with caution, as the latter even when stated *bonâ fide*, are seldom realised.

The number of sequestrations by persons engaged in each of the following trades or occupations during 1891 was as follows:—

Trades and Occupations.	Number.	Trades and Occupations.	Number.
Labourers	143	Carpenters	16
Miners	134	Occupation not stated	16
Agents	103	Graziers	14
Farmers	76	Civil Servants	12
Licensed Victuallers	57	Grocers	12
Contractors	43	Drivers	10
Storekeepers	28	Salesmen	10
Clerks	26	Others	431
Builders	25		
Dealers	17	Total	1,189
Blacksmiths	16		

The number of insolvencies and bankruptcies during 1860, and subsequent periods, was as follows:—

Year.	Number of Insolvencies and Bankruptcies.			Amount of		
	Voluntary.	Compulsory.	Total.	Liabilities as shown in the insolvents' schedules.	Assets as shown in the insolvents' schedules.	Deficiency shown in the insolvents' estates.
				£	£	£
			INSOLVENCIES.			
1860	483	28	511	835,826	541,745	294,081
1865	509	19	528	511,590	278,046	233,544
1870	448	28	476	671,870	394,007	277,863
1875	462	38	500	536,440	172,181	364,259
1880	784	50	834	479,864	292,233	187,631
1881	664	60	724	379,290	218,212	161,078
1882	686	48	734	307,084	167,876	139,208
1883	720	65	785	444,594	245,836	198,758
1884	856	62	918	836,165	580,195	255,970
1885	849	80	929	773,212	589,359	183,853
1886	1,116	105	1,221	989,262	733,127	256,135
1887	1,249	102	1,351	1,081,726	788,941	292,785
			BANKRUPTCIES.			
1888	735	116	851	659,307	459,677	199,630
1889	935	166	1,101	794,603	396,723	397,880
1890	1,079	164	1,243	1,203,685	540,726	662,959
1891	1,016	222	1,238	989,778	454,211	535,567

Included in the figures for the last four years were petitions withdrawn, refused, still pending, &c., amounting to 28, 39, 50, and 49 respectively, so that the total number of sequestrations during each of the three years was 823, 1,062, 1,193, and 1,189 respectively.

MORTGAGES ON WOOL, LIVE STOCK, CROPS, &c.

Money secured by lien on wool.

The amount of money advanced on the security of the wool clip and the live stock of the Colony is always very large. Such advances do not necessarily mean a scarcity of money on the part of the borrowers, as the system of liens and mortgages is part of the ordinary method of carrying on the trade of the country. The transactions during 1860 and subsequent periods were as follows:—

Year.	Preferable Liens on Wool.			Mortgages on Live Stock.				
	No. of Liens.	No. of Sheep.	Amount of Liens.	No. of Mortgages.	No. of Sheep.	No. of Horned Cattle.	No. of Horses.	Amount lent.
			£					£
1860	62	688,056	112,752	294	1,330,350	386,703	6,299	1,614,890
1865	116	1,575,455	274,521	327	2,389,949	277,552	6,518	2,037,463
1870	317	3,411,469	371,232	294	1,281,340	147,119	3,884	840,584
1875	686	4,197,853	674,747	749	2,844,740	199,031	7,290	2,008,970
1880	1,479	6,216,741	981,172	901	4,858,265	183,555	401	2,818,967
1881	1,609	5,709,061	904,012	1,275	5,982,994	215,564	9,646	4,623,915
1882	1,289	4,837,667	801,175	1,074	3,865,331	112,441	8,391	3,391,984
1883	1,301	6,349,801	1,026,574	1,077	3,601,890	131,068	7,389	2,486,467
1884	1,379	4,168,185	973,179	1,471	2,696,994	77,241	8,097	1,881,082
1885	1,236	5,263,407	1,327,214	1,431	4,730,233	117,241	10,764	2,962,471
1886	1,187	9,049,194	1,454,154	1,363	4,323,553	79,616	10,349	2,404,813
1887	1,285	9,296,975	1,685,655	1,563	3,954,286	79,312	11,464	2,054,785
1888	1,174	9,800,520	1,282,125	1,998	4,002,148	80,120	12,364	2,003,216
1889	1,169	7,861,233	1,282,065	2,018	4,572,477	100,026	11,824	2,432,704
1890	1,461	9,005,582	1,562,270	2,230	4,962,300	93,298	12,543	3,159,636
1891	1,701	10,201,412	1,320,823	2,328	6,896,947	111,432	16,728	2,632,758

When any sum has been secured, both by a lien on the wool and by a mortgage of the sheep, the amount is included under the head of mortgages only. The above table does not, however, give an exact statement of the case, as a large portion of the advances made were discharged, as will be seen in the following table, which gives the amount of discharged mortgages on live stock registered :—

Discharges of advances.

Year.	Number.	Amount.	Year.	Number.	Amount.
		£			£
1860	103	652,281	1884	306	3,801,352
1865	110	812,079	1885	208	1,173,673
1870	95	435,762	1886	150	849,742
1875	182	992,780	1887	210	1,073,674
1880	232	3,804,475	1888	240	1,160,307
1881	399	2,781,122	1889	256	1,191,089
1882	258	1,900,443	1890	368	2,512,551
1883	126	600,426	1891	380	1,184,372

Advances on growing crops.

Other advances on produce are also made, the principal being those on growing crops. Such advances do not ordinarily reach large sums either individually or in their total. In 1888, owing to the drought, farmers were compelled to obtain much heavier advances than usual on such crops as survived the severity of the season; the advances for the three following years averaged less than one-third of the amount of that year. The amount of advances made on growing crops for 1860 and subsequent periods is given herewith :—

Year.	Number.	Amount.	Year.	Number.	Amount.
		£			£
1860	Nil.	Nil.	1884	888	54,057
1865	112	9,134	1885	857	71,153
1870	213	10,045	1886	989	70,212
1875	302	14,181	1887	949	67,379
1880	797	81,626	1888	1,006	247,466
1881	897	42,255	1889	1,227	83,748
1882	854	40,379	1890	1,089	75,439
1883	814	50,789	1891	1,171	78,448

Mortgages registered.

Mortgage transactions have largely increased during the last ten years. In 1885, 11,661 mortgages, aggregating £17,445,488 were registered, nearly eight millions of which was lent on country lands. This total was the highest reached till 1891, when the number of mortgages registered was 14,871, and the sum advanced £19,056,137. These figures are incomplete, for there were many mortgages not registered; besides, in many instances the amounts lent by the banks are not stated, but simply the words, "valuable consideration," or "cash credit," inserted in the deed. There are two Acts of Parliament under which such transactions are registered. The following table shows the number of mortgages registered under each Act since 1880:—

Year.	Under Act 7 Vic. No. 16.		Under Act 26 Vic. No. 9.		Total.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.
		£		£		£
1880	2,995	4,048,952	2,193	3,902,272	5,188	7,951,224
1881	4,505	5,268,449	2,336	4,155,225	6,841	9,423,674
1882	4,159	4,924,596	2,605	4,710,855	6,764	9,635,451
1883	4,088	5,859,472	2,825	5,781,167	6,913	11,640,639
1884	4,653	5,620,421	3,437	4,447,739	8,090	10,068,160
1885	7,618	11,360,108	4,043	6,085,380	11,661	17,445,488
1886	6,933	7,570,210	4,295	5,975,898	11,228	13,546,108
1887	6,108	5,869,302	4,239	6,930,665	10,347	12,799,967
1888	7,452	8,765,109	4,274	7,520,914	11,726	16,286,023
1889	9,312	7,277,334	4,416	7,256,931	13,728	14,534,265
1890	9,883	8,072,218	4,697	8,559,662	14,580	16,631,880
1891	10,348	10,520,261	4,523	8,535,876	14,871	19,056,137

Mortgages discharged.

The amount of mortgages discharged has always been much less than the amount registered. This arises partly from the fact that mortgages are as a rule paid off by instalments, and the discharge is given for the last sum paid, which might happen to bear a very small proportion to the total sum borrowed. The figures for 1880 and succeeding years are as follow :—

Year.	Under Act 7 Vic. No. 16.		Under Act 26 Vic. No. 9.		Total.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.
		£		£		£
1880	1,860	715,148	1,052	1,945,915	2,912	2,661,063
1881	2,386	1,926,357	1,501	2,067,140	3,887	3,993,497
1882	2,051	1,676,224	1,603	2,417,460	3,654	4,093,684
1883	1,388	1,433,912	1,369	1,833,016	2,757	3,266,928
1884	2,216	1,957,765	1,696	2,684,470	3,912	4,642,235
1885	3,473	2,239,075	2,068	3,373,327	5,541	5,612,402
1886	2,773	2,515,398	2,082	2,164,254	4,855	4,679,652
1887	3,067	2,909,931	2,431	7,520,914	5,498	10,430,845
1888	4,160	4,273,034	2,926	4,179,503	7,086	8,452,537
1889	3,707	2,669,358	2,488	3,300,033	6,195	5,969,391
1890	4,215	2,609,560	2,559	4,230,172	6,774	6,839,732
1891	4,722	3,140,871	2,863	3,991,165	7,585	7,132,036

Liens on wool.

The total amount of liens on wool registered during the ten years ending with 1891, was £12,715,234 ; the mortgages on live stock amounted to £25,409,856, and on land, £141,644,118, in all, £179,769,208. During the same period the mortgages discharged were: liens on wool to the full amount in due course, mortgages on live stock, £15,447,629, and on land, £61,119,442, making a gross total of £89,282,305. The sums of money advanced on mortgages of various kinds over that paid off was therefore apparently £90,486,903 in ten years. As regards the liens, such indebtedness does not exist, for the mortgages over stock and clip are for the most part terminated without being formally discharged. Even in the case of mortgages on real estate the amount outstanding does not mean money actually owing ; in very many cases it simply represents the limits within which clients of banks and other loan institutions are entitled to draw, though many of these clients may be in credit while their property is mortgaged and unreleased.

FIRE AND MARINE INSURANCE.

Returns of insurance business.

Under the authority of the Census and Industrial Returns Act of 1891, returns are now being collected of the business transacted by the Fire and Marine Insurance Companies operating in the Colony. The information will not be available till early in 1893.

Fire Brigades Act.

The Fire Brigades Act of 1884 provides for the annual outlay of the Metropolitan Fire Brigades being contributed in equal amounts by the Government, the Fire Insurance Companies insuring in the metropolitan district, and the municipalities within the same area, and that portion contributed by the companies is distributed amongst them proportionately to the amount of risks held, a return of which is annually supplied by these companies under the Act. With this exception the law does not provide for the publication of sworn returns, and any information regarding fire insurance can only be gathered from the balance-sheets and reports issued by these companies, which include all their operations, no attempt being usually made to separate the transactions within the Colony. A number of the companies transact both fire and marine insurance, several of which make no distinction between the two branches. Of the 56 companies carrying on business in Australasia, 25 have their head offices in the Colonies, seven of which are situated in Sydney.

Sworn returns not compulsory.

Fire risks.

The following is an account of the risks at the beginning of 1892. As it is not compulsory for the companies to furnish returns of risks held outside the metropolitan district, the returns are anything but complete :—

	£		£
Metropolitan District......	58,207,183	Lismore	200,000
Broken Hill	2,500,000	Maitland, West	967,878
Deniliquin	200,000	Newcastle	1,000,000
Goulburn	800,000	Stockton	35,000
Glen Innes.	130,819	Wollongong	110,000
Hamilton..	75,000		

The declared amount of risks held in the metropolitan district since the Fire Brigades Act came into force was :—

	£
1885	36,691,000
1886	41,631,582
1887	46,253,370
1888	49,209,395
1889	53,583,000
1890	57,148,388
1891	58,207,183

Increase of risks to population.

The gross increase for the period shown was £21,516,183, or 58·6 per cent. During the same period the population of the metropolitan district increased about 36·5 per cent., from which it would appear that the wealth of Sydney is advancing at a rate much more rapid than the population, though the increase of the latter is abnormally large. Some part of the increase shown may be due to an extension of the facilities offered to insurers, but the amount due to such cause will not be very large.

Fires in metropolis.

The number of fires which occurred in the metropolitan district during the year 1891 was 262, which may be classified as follows, according to the damage done :—

Slight damage	216
Serious damage	27
Total destruction	19
Total	262

Besides these there were 33 chimney fires and 52 false alarms.

Properties insured.

Of the premises totally destroyed by fire, 13 were insured and 4 not insured, while in 2 cases it was not ascertained whether the properties were insured. Of the other serious fires, 21 were insured, 3 uninsured, while in 3 cases it was not known whether the properties were insured or not. The information regarding insurance was not obtained in all instances where the loss was slight, but of the property reported to be damaged slightly the loss was insured in 129 cases, uninsured in 19 cases, and 68 insurance unknown. So that it would appear the total number of insurances was 163 as against 26 non-insurances, or 86·24 per cent. of the whole number for which the information is available. The percentage just given must be taken with qualification, for as the premises and the property therein contained frequently belong to different persons, so in order to gauge the extent to which insurance is practised, it would require to be ascertained in how many instances the double insurance was effected, for in the returns above given a property is considered insured if the premises be covered and the contents uninsured, the converse also being the case.

Firemen in metropolitan district.

The total number of firemen attached to the brigades in the metropolitan and country districts was as follows, the number of fires attended being also given :—

Name of Station.	Number of—	
	Actual fires attended.	Men in the Brigades.
City Companies—		
Metropolitan Fire Brigades (4 stations)	262	37
North City	77	13
Paddington Brewery	95	21
Standard Brewery	96	18
Suburban Companies—		
Alexandria	33	21
Ashfield	13	16
Balmain (2 stations)	8	24
Burwood	6	15
Darlington	15	18
Glebe	16	17
Granville.	3	20
Leichhardt	7	17
Manly	4	16
Newtown	30	15
Paddington.	10	20
Parramatta No. 1	2	24
Parramatta No. 2	2	21
St. Leonards (2 stations).	1	23
Waterloo	20	20
Waverley	11	18
Woollahra	15	18
Country Companies—		
Albury	5	29
Bathurst	8	20
Bourke	4	7
Broken Hill	39	18
Country Companies—*continued.*		
Deniliquin	1	25
Forbes	4	25
Goulburn	2	30
Glen Innes	3	17
Grafton, North	2	15
Do South.	...	10
Hamilton	24	20
Hay	4	14
Honeysuckle	28	34
Lambton	1	20
Lismore	5	15
Maitland, West	1	26
Newcastle City	19	20
Newcastle Hose and Reel.	42	20
Newcastle Salvage and Ambulance Corps.	18	21
Singleton	...	30
Stockton	3	25
Tighe's Hill	11	28
Wagga Wagga	6	22
Wallsend and Plattsburg.	5	26
Wollongong	3	16
Total	964	945

MONEY ORDERS.

Postal business money orders.

As mentioned in a previous chapter, the money order system was brought into operation in January, 1863, and the amount of transactions during that year, and subsequent periods ending with 1891, is given in the subjoined table. This portion of the business of the Post Office, like that of the other branches of this institution, has expanded considerably. In 1863 there were issued 3 orders to every hundred persons in the community, in 1891 the number reached 43, the total value advancing from £53,862 to £1,577,744, while the value of orders paid rose from £40,875 to £1,518,987 during the same period. This increase is due mainly to the greater facilities now afforded for the transmission of money by this method, though it is also to some extent attributable to the more general appreciation of the money order system amongst the working classes of the community. The following is a statement of the business transacted since the inception of the money order system:—

Year.	Money Orders.				Commission.
	Issued.		Paid.		
	Number.	Amount.	Number.	Amount.	
		£		£	£
1863	11,478	53,862	8,425	40,875	615
1865	28,469	130,747	23,556	112,367	1,439
1870	65,743	289,325	58,386	258,322	2,924
1875	100,293	419,622	89,572	380,293	4,224
1880	190,606	669,022	168,944	583,340	7,684
1881	220,670	771,978	195,757	675,025	8,799
1882	247,716	883,524	218,334	771,861	10,027
1883	275,592	963,698	239,595	829,770	11,371
1884	305,883	1,068,068	270,678	921,904	12,651
1885	337,856	1,169,569	298,082	997,961	14,243
1886	345,825	1,134,955	309,576	982,336	14,927
1887	360,759	1,131,884	330,594	1,010,297	14,960
1888	388,416	1,215,132	368,081	1,116,433	15,807
1889	400,487	1,188,227	390,414	1,108,086	15,961
1890	442,425	1,252,305	441,845	1,193,954	16,939
1891	488,326	1,577,744	507,849	1,518,987	19,198

TRANSACTIONS—REAL PROPERTY ACT.

The "Torrens Act."

For the purpose of facilitating delays with landed property, the Real Property Act, commonly called "Torrens Act," was passed in 1862. In 1873 the Act was slightly amended, and a further amendment was made in 1878. In the last amendment an important clause was inserted, whereby the registered owners of the land are protected from the operation of the Statutes of Limitations, and therefore the title is not liable to be taken from them by any length of adverse possession. The Act is very simple and useful in its provisions, and has been largely availed of since its introduction. The chief advantage gained by those bringing properties under the Act is that from the moment the land is registered, and a certificate granted, the title of the person holding the certificate becomes indefeasible, unless it has been fraudulently obtained. Provision is, however, made for error in transfer, by which persons might be deprived of their rightful property, as, should the transfer be made to the wrong person, the holder of the certificate cannot be dispossessed of his property unless he has acted fraudulently. To indemnify the Government for compensating persons who, through error, may have been deprived of their properties, an assurance fund has been created by a contribution of one half-penny in the pound being levied on all property brought under the Act. This fund, at the end of 1892, amounted to over £117,600, and it is a gratifying proof of the value of the Act and the facility of its working that scarcely any withdrawals from this fund have been necessary.

Possession does not constitute title.

Indemnity fund.

The approximate area of land brought under the Act to the 31st December, 1892, was 17,191,500 acres, and the value of the same was £35,572,138, the distribution of which is shown in the following table. On the succeeding page will be found a return showing the number of transfers, mortgages, discharges, and encumbrances for the period 1881–92, together with the amounts of consideration involved, followed by a list of transfers, mortgages, &c., under the same Act:—

Land brought under the Real Property Act.

Year.	Number of—		Area.		Value.			Assurance Fund.
	Applications other than Grants.	Crown Grants.	Private Property brought under the Act.	Crown Grants registered under the Act.	Private Property.	Crown Lands.	Total.	
			Acres.	Acres.	£	£	£	£
1863 to 1880	5,029	98,477	519,028	9,902,422	4,439,234	10,617,344	15,056,578	38,205
1881	298	7,406	17,515	909,866	701,804	1,002,402	1,704,206	5,562
1882	287	8,965	54,937	1,257,449	837,883	1,402,721	2,240,604	6,396
1883	264	8,200	22,006	1,040,558	803,553	1,301,850	2,105,403	6,403
1884	276	5,829	31,420	397,927	607,928	498,481	1,106,409	4,989
1885	303	4,006	31,230	503,565	1,157,000	666,169	1,823,169	6,546
1886	270	4,447	14,065	399,287	723,641	562,960	1,286,601	4,899
1887	343	4,350	47,318	382,649	1,140,155	470,661	1,610,816	5,200
1888	385	3,563	62,085	318,875	1,840,008	421,058	2,261,066	5,428
1889	364	4,791	45,309	355,330	1,348,812	512,237	1,861,049	8,928
1890	330	4,455	79,675	194,953	1,068,348	336,369	1,404,717	9,137
1891	359	4,275	51,145	279,247	1,163,044	403,421	1,566,465	8,647
1892	303	3,098	83,627	189,990	1,243,890	301,165	1,545,055	7,289
Total	8,811	161,862	1,059,360	16,132,118	17,075,300	18,496,838	35,572,138	117,629

Transfers, Mortgages, Discharges, and Encumbrances.

Year	Transfers.		Mortgage.		Discharges.		Encumbrances.	
	No.	Amount of consideration.	No.	Amount of consideration.	No.	Amount of consideration.	No.	Amount of consideration.
		£		£		£		£
1881	6,317	3,024,959	2,366	4,155,225	1,501	2,067,140	10	57,962
1882	7,422	2,960,405	2,605	4,710,855	1,603	2,417,460	4	2,200
1883	7,647	2,604,774	2,825	5,781,167	1,369	1,833,016	4	1,080
1884	8,673	2,677,768	3,437	4,447,739	1,696	2,684,470	2	1,250
1885	8,970	3,164,734	4,043	6,085,380	2,068	3,373,327	6	....
1886	9,242	3,060,244	4,295	5,975,898	2,082	2,164,254	8	....
1887	8,775	2,784,853	4,239	6,930,665	2,431	7,520,914	4	....
1888	9,485	5,175,500	4,274	7,520,914	2,926	4,179,503	7	....
1889	8,946	3,333,411	4,416	7,256,931	2,488	3,300,033	1	....
1890	8,426	3,600,392	4,697	8,559,662	2,559	4,230,172	9	....
1891	9,531	3,602,082	4,523	8,535,876	2,863	3,991,165	4	....
1892	9,334	2,716,379	4,644	6,770,594	2,644	2,809,272	10	....

FRIENDLY SOCIETIES.

Friendly Societies.

The history of Friendly Societies in New South Wales is long and honorable, and the admirable service which these societies perform in promoting habits of thrift and self-reliance cannot be too highly praised. Statistics relating to the business of Friendly Societies are unfortunately incomplete and not altogether reliable; the figures therefore, which are given hereunder, must be accepted merely as approximate. The societies registered are of two classes, viz., those associated with others in orders, and those working independently. To the first category belong nineteen orders, some of which are divided into districts, and again into lodges, branches, courts, or tents, as the case may be. It is probable the number of societies owning allegiance to the 19 orders named is not far short of 870; the independent societies number about 50, so that the total number of all societies registered and still in working order is about 920.

Imperfection of returns.

Owing to the imperfection of the returns, the number of members can only be stated approximately. Towards the close of 1892 the membership is estimated at 66,300, and the funds £442,670.

Benefits.

The benefits promised by Friendly Societies are, in kind, much the same in all societies, and usually comprise medical attendance and medicine for a member and his family, sick pay—generally £1 per week for the first six months, reduced thereafter to 15s. or 10s.—allowance in the event of the death of a member's wife, and funeral money to his wife on the death of a member. The Act limits the amount payable on the death of a member without administration to £100 (sec. 41), but there is no limit to the amount of sick pay, nor to the number of societies to which one person may belong, and from which he may receive benefits.

Trade Unions.

In addition to the Friendly Societies properly so called, some of the registered Trade Unions give benefits analogous to those of the societies mentioned above. The benefits, however, are usually smaller in amount, seldom exceeding 12s. a week for sick pay, and £7 in case of death. A few Trade Unions also make allowance to their members when they are out of employment.

PART XXII.

Population and Vital Statistics.

Results of the Census.

ONE of the first results of the Census of 1891 was the re-adjustment of the estimates of population. Prior to the 5th April, 1891, there had been no actual count of the people of New South Wales since 1881, but an approximate return was made up of the estimated population on the 31st December of each year. This was done by taking into account the increase caused by the excess of births over deaths, and arrivals over departures. It is evident that if these data could be ascertained exactly, there would be no difficulty in making an accurate estimate of the population at any time. But although the machinery for the registration of births and deaths ensures a fairly correct return under these heads, it is not so easy to obtain exact particulars respecting the arrivals and departures—especially the latter. The lists of passengers arriving by the sea are usually accurate; but in the case of persons departing, it is found that large numbers go on board steamers at the last moment, without having previously booked their names, and so are not recorded amongst the emigrants from the Colony. It therefore becomes necessary when estimating the population to make allowance for unrecorded departures. The results of the Census of 1891, however, showed that the allowance made was not sufficient, and that the estimates, for the previous years were in excess of the truth. Consequently, in the present issue the figures have been recast, and proper allowance has been

Unrecorded departures.

made, which will account for whatever discrepancy there may be between the tables now published, and those contained in former issues.

Estimate of Australasian population.

The following is an estimate of the population of each of the Australasian Colonies on the 30th June, 1892, except Queensland and New Zealand, where no estimate has been made since the end of 1891:—

Colony.	Population.
New South Wales	1,182,500
Victoria	1,162,756
Queensland	410,330
South Australia (with Northern Territory)	324,424
Western Australia	55,854
Tasmania	152,769
New Zealand (exclusive of 41,993 Maoris)	634,058
Australasia	3,922,691

In the preceding table due allowance has been made for unrecorded departures, and in the case of Western Australia for unrecorded arrivals which took place in the northern parts of that enormous territory where there did not exist proper official means of keeping account of the adventurers, who, from time to time, attracted by rumours of its vast natural resources, visited that comparatively unknown land. The population of the whole of Australasia was estimated at 3,899,036 at the end of 1891, the proportion belonging to each Colony being as follows:—New South Wales, 29·89; Victoria, 29·69; Queensland, 10·52; South Australia, 8·36; Western Australia, 1·37; Tasmania, 3·91; New Zealand, 16·26.

Estimated population of the Colony.

The estimated population of New South Wales at the close of various years, from 1861 to 1891, will be found hereunder:—

Year.	Males.	Females.	Total.
1861	201,574	156,404	357,978
1866	235,116	193,697	428,813
1871	282,846	234,912	517,758
1876	333,515	280,666	614,181
1881	429,020	353,060	782,080
1882	447,100	367,900	815,000
1883	473,980	387,330	861,310
1884	498,310	406,670	904,980
1885	523,030	426,540	949,570
1886	543,260	446,080	989,340
1887	558,350	461,980	1,020,330
1888	573,190	477,890	1,051,080
1889	589,010	492,810	1,081,820
1890	609,650	512,210	1,121,860
1891	630,870	534,430	1,165,300

Net increase.

The following table gives the net increase of male and female population during each year since 1881, after allowing for the number of persons whose departure from the Colony was not formally recorded.

Year.	Males.	Females.	Total.
1882	18,080	14,840	32,920
1883	26,880	19,430	46,310
1884	24,330	19,340	43,670
1885	24,720	19,870	44,590
1886	20,230	19,540	39,770
1887	15,090	15,900	30,990
1888	14,840	15,910	30,750
1889	15,820	14,920	30,740
1890	20,640	19,400	40,040
1891	21,220	22,220	43,440

Annual rate of increase—Australasia.

In the following table will be found the rate at which population has increased during each of the last ten years in the various colonies, the average rate for Australasia being 3·28 per cent.

	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.	Australasia.
1882	4·21	2·24	9·14	2·32	3·07	2·30	3·14	3·52
1883	5·68	2·35	15·57	3·56	3·42	2·34	4·23	4·86
1884	5·07	2·59	7·47	2·52	4·56	2·76	4·06	4·02
1885	4·93	2·61	4·97	0·37	7·41	1·76	2·93	3·47
1886	4·19	3·23	4·56	— 0·53	13·53	1·83	2·25	3·04
1887	3·13	3·25	5·90	1·29	8·02	3·32	2·24	3·19
1888	3·01	4·26	4·03	— 0·55	— 0·45	1·75	0·44	2·63
1889	2·92	2·48	3·40	1·40	4·09	2·77	1·98	2·56
1890	3·70	2·68	2·35	1·08	5·93	2·25	1·54	2·56
1891	3·87	2·15	4·42	1·73	15·11	5·04	1·34	3·00
Mean of 10 years………	4·07	2·78	6·18	1·32	6·47	2·61	2·42	3·28

Minus sign (—) denotes a decrease.

Growth of Population.

The growth of population in the continent of Australia, and also in the whole of Australasia, in periods from 1861 to the end of last year, is shown in the following table :—

Year.	Continent of Australia.	Australasia.
1861	1,076,666	1,265,898
1866	1,345,058	1,646,540
1871	1,601,295	1,970,066
1876	1,855,996	2,360,555
1881	2,204,495	2,822,999
1882	2,285,350	2,922,258
1883	2,402,760	3,064,304
1884	2,500,765	3,187,565
1885	2,592,906	3,298,313
1886	2,677,911	3,398,658
1887	2,768,537	3,506,882
1888	2,855,705	3,599,086
1889	2,931,978	3,691,190
1890	3,014,606	3,785,558
1891	3,112,359	3,899,036

Marked advantages of N.S.W. to settlers.

As tested by the voluntary influx of population, the attraction which New South Wales has for many years offered to the settler is most marked, and no test could be more practical. As long as the balance of attraction remained with the other colonies, so long did the tide of immigration set to their shores; but for many years past New South Wales has offered a more substantial reward to the settler than any of its neighbours, and the result is seen in the increased numbers who have come hither. The table herewith shows the excess of arrivals over departures in each of the Australasian Colonies between the census of 1881 and that of 1891:—

Colony.	Net Increase due to Immigration.
New South Wales	162,828
Victoria	116,361
Queensland	102,776
South Australia	—28,278
Western Australia	14,106
Continent of Australia	367,793
Tasmania	5,961
New Zealand	7,437
Australasia	381,191

Minus (—) indicates decrease.

Increase by Immigration.

The above table shows that out of a total increase by immigration of 381,191 persons, the large proportion of 43 per cent. found a home in New South Wales, as against 31 per cent. attracted to Victoria, and 27 per cent. to Queensland. In the total of 162,828 credited to New South Wales are included 34,079 assisted immigrants. During the same period 103,140 assisted immigrants arrived in Queensland, but as the net increase from immigration was only 102,776, it is evident that some of the immigrants did not remain in that Colony. Since 1860, the year following the separation of Queensland, the arrivals in New South Wales have in every year exceeded the departures. The greatest apparent excess during any one year was in 1883, when the number of arrivals was greater than the departures by 28,579.

Assisted immigration.

Assisted immigration dates from 1832, and continued to be the settled policy of the country, with slight interruptions, until its practical cessation during 1888. The number of assisted immigrants arriving in New South Wales from 1861 to the close of 1891 will be found herewith :—

Year.	Adults.			Children under 12 Years.			Total.
	Males.	Females.	Total.	Males.	Females.	Total.	
1861	794	595	1,389	101	99	200	1,589
1862	1,172	1,047	2,219	214	198	412	2,631
1863	1,966	1,872	3,838	391	404	795	4,633
1864	1,701	1,672	3,373	289	315	604	3,977
1865	1,073	1,214	2,287	213	217	430	2,717
1866	501	543	1,044	92	68	160	1,204
1867	385	435	820	66	58	124	944
1868	183	215	398	41	31	72	470
1869	......	47	47	......	......	......	47
1870	......	......	......	......	......	......	......
1871	28	299	327	15	15	30	357
1872	25	271	296	16	14	30	326
1873	13	119	132	3	5	8	140
1874	427	411	838	109	133	242	1,080
1875	395	324	719	135	119	254	973
1876	642	429	1,071	208	184	392	1,463
1877	2,892	1,627	4,519	743	756	1,499	6,018
1878	2,091	1,754	3,845	699	646	1,345	5,190
1879	1,906	2,141	4,047	840	844	1,684	5,731
1880	1,150	1,195	2,345	414	375	789	3,134
1881	929	1,029	1,958	327	292	619	2,577
1882	1,209	991	2,200	509	524	1,033	3,233
1883	3,370	2,718	6,088	1,154	1,127	2,281	8,369
1884	2,785	2,606	5,391	1,095	1,082	2,177	7,568
1885	1,871	2,211	4,082	736	736	1,472	5,554
1886	1,044	1,905	2,949	572	560	1,132	4,081
1887	131	687	818	286	258	544	1,362
1888	58	190	248	149	131	280	528
1889	44	168	212	104	115	219	431
1890	55	132	187	110	79	189	376
1891	26	81	107	45	38	83	190
Total ...	28,866	28,928	57,794	9,676	9,423	19,099	76,893

Birthplaces of immigrants.

The birthplaces of immigrants cannot in all cases be accurately determined, but it is quite clear, from the different census returns, that the great bulk has come from the United Kingdom, as will presently appear. A record, however, has been kept of the native countries of immigrants who were assisted by Government, and of the 76,893 persons enumerated in the foregoing table, 75,193 were British born—36,865 being from England and Wales; 30,049 from Ireland; and 8,279 from Scotland; and the remainder, 1,700, from other countries.

Arrivals by sea.

The total number of persons arriving in the Colony by sea, as recorded at the Shipping Office, during each year from 1880 to 1891, is hereunder notified :—

Year.	Adults.			*Children.	Total Immigrants.
	Male.	Female.	Total.		
1881	30,538	10,645	41,183	4,449	45,632
1882	29,102	10,904	40,006	5,100	45,106
1883	40,914	15,852	56,766	7,135	63,901
1884	44,667	17,579	62,246	6,899	69,145
1885	46,570	18,352	64,922	7,885	72,807
1886	45,035	18,334	63,369	5,535	68,904
1887	43,769	15,236	59,005	4,413	63,418
1888	40,295	15,446	55,741	4,435	60,176
1889	39,208	16,719	55,927	4,855	60,782
1890	43,124	19,107	62,231	5,285	67,516
1891	44,519	19,318	63,837	6,082	69,919

* Sexes not stated by shipping authorities.

Departures by sea.

The departures for the same period were as follows :—

Year.	Adults.			* Children.	Total Emigrants.
	Male.	Female.	Total.		
1881	18,668	7,273	25,941	2,484	28,425
1882	18,672	6,857	25,529	2,512	28,041
1883	23,407	8,739	32,146	3,176	35,322
1884	29,311	10,685	39,996	3,599	43,595
1885	31,060	11,508	42,568	3,707	46,275
1886	34,453	11,841	46,294	2,736	49,030
1887	38,162	12,439	50,601	3,619	54,220
1888	36,278	14,553	50,831	4,070	54,901
1889	32,535	14,030	46,565	3,753	50,318
1890	34,302	15,535	49,837	4,043	53,880
1891	33,877	14,512	48,389	3,684	52,073

* Sexes not stated by shipping authorities.

THE CENSUS OF 1891.

Census of 1891.

On the night of Sunday, April 5th, 1891, a Census, or enumeration of the population, was taken throughout Australasia, as well as the other portions of the British dominions, which comprise about one-fourth of the habitable surface of the globe, and are peopled by nearly one-fifth of the whole human race. In the Colony of New South Wales special provisions were made to ensure the completeness and accuracy of the Census. The Colony was divided into convenient districts, each presided over by an enumerator, and a small army of collectors was appointed, captained by the enumerators, under the general supervision of the Government Statistician, who distributed the requisite schedules, and afterwards collected them and saw that they were properly filled up. This was, however, but the beginning of the work, for a large staff of tabulators had then to take the schedules in hand, to dissect, classify, tabulate and arrange the figures therein contained, and to evolve from the miscellaneous mass of information all the necessary particulars respecting the ages, condition, religion, occupation, and other details respecting the people of this country. This was a long and arduous task, and is not yet entirely complete, although there is sufficient done to exhibit some important and interesting results.

Population at date of Census

It was ascertained that the population of New South Wales, on the Census night, consisted of 1,132,234 persons, of whom the males numbered 612,562, and the females 519,672. The males thus represented a trifle over 54 per cent. of the whole population, while the proportion of females was very nearly 46 per cent. Expressed in other terms the proportion of the sexes showed that for every 100 males there were about 85 females, and for every 100 females there were nearly 118 males. The total number given above includes Chinese and Aborigines, as well as half-castes of each. The numbers of these were as follows:—Chinese and Chinese half-castes, 13,555 males and 601 females, or 14,156 in all; Aborigines and Aboriginal half-castes, 4,559 males and 3,721 females, or a total of 8,280. Excluding all these the population consisted of 1,109,798 persons, of whom 594,448 were males and 515,350 were females, the proportion of the sexes in this case being—males, 53·6 per cent., and females 46·4 per cent.; that is, a little more than 115 men to every 100 women, or nearly 86 women to every 100 men.

Population at different censuses.

The following figures, disclosed by the censuses of 1861, 1871, 1881, and 1891, show the population of New South Wales at those periods:—

Year.	Males.	Females.	Total.
1861	198,488	152,372	350,860
1871	275,551	228,430	503,981
1881	411,149	340,319	751,468
1891	612,562	519,672	1,132,234

DISTRIBUTION OF SEXES.

Proportion of males to females.

The relative proportion of males to females in the whole Colony has undergone little change for many years past, as will be seen from the following figures, which represent the percentage of males and females to the whole population at the last three decennial censuses, and at the end of each of the last ten years:—

Year.	Males.	Females.
1861	56·57	43·43
1871	54·67	45·33
1881	54·86	45·14
1885	55·08	44·92
1886	54·90	45·10
1887	54·72	45·28
1888	54·53	45·47
1889	54·45	45·55
1890	54·34	45·66
1891	54·14	45·86

Excess of male population.

The excess of male over female population is chiefly at the ages of from 20 to 50 years, and is caused by the large influx of males in the prime of life, from the neighbouring colonies and the British Islands. It should be observed, however, that owing to the lower death-rate of females the disproportion in the number of the sexes is being slowly abated.

BIRTHPLACES OF THE PEOPLE.

Natives of the Colony.

Natives of United Kingdom.

Natives of other Colonies.

Of the 1,132,234 people who composed the population of New South Wales when the Census was taken in 1891, the birthplaces of all but 1,223 were recorded, but of those who failed to state the place of their nativity 1,133 had British, and 90 had foreign names. Excluding the Aborigines, 725,015 of the inhabitants of the Colony were born in it, and of these 363,495 were males, and 361,520 were females. No less than 266,101 individuals came from the United Kingdom, the males numbering 158,324, and the females 107,777. Of these 92,617 males and 56,615 females, or 149,232 in all, were from England; Wales contributed 3,232 males and 1,765 females, making a total of 4,997; those of Scottish birth numbered 36,821, of whom 23,016 were males, and 13,795 were females, while those from Ireland consisted of 39,449 males and 35,602 females, or 75,051 in all. As might have been expected the neighbouring colonies furnished a fair share towards the population of New South Wales. For instance, Victoria contributed 40,768 persons—22,792 males and 17,967 females. 10,173 individuals resided here whose natal place was Queensland, 4,987 of whom were males and 5,186 were females. Natives of South Australia reached a total of 17,716, the males numbering 9,850, and the females 7,866. Only 464 natives of Western Australia—of whom 244 were males and 220 were females,—were residents of this Colony, but there were 5,851 Tasmanians and 9,015 New Zealanders. Of the former, 3,075 were males and 2,776 were females; of the latter, the males numbered 4,883, and the females 4,132. In addition to these, there were 874 persons who enumerated themselves as natives of Australia, without defining the particular Colony they hailed from; of these, 471 were males and 403 were females.

Natives of British Possessions.

Other British possessions in different parts of the globe contributed 4,554 males and 2,083 females, or 6,637 persons in all, to the inhabitants of New South Wales. 177 of these, of whom 127 were males, and 50 were females, came from Malta and other places in the Mediterranean. The Asian possessions of the United Kingdom furnished 2,105 persons, being 1,557 males and 548 females. Of these, no less than 1,800, or 1,309 males and 491 females came from India and Burmah, the remainder being mostly from Ceylon, Hong Kong, and the Straits Settlements. The African dependencies gave a quota of 737 persons, 438 of whom were males, and 299 females. These were mostly from the Mauritius and Cape Colony. British possessions in America contributed 958 males and 209 females, or 1,167 in all, of whom 1,074 persons—being 885 males and 189 females—came from Canada. The Colony was indebted to the West Indies for only 444 persons, 350 being males and 94 females; and there were 4 males from British Polynesian Islands. British subjects born at sea numbered 1,930, of whom 1,067 were males and 863 were females, and there were also 73 persons—53 males and 20 females—whom simply entered themselves as British subjects, without specifying their birthplaces.

Foreigners.

The persons of foreign nationality who resided in New South Wales at the the time of the census numbered 39,824, and comprised 34,229 males and 5,595 females. Of these, the largest portion was from European countries, numbering 22,065 in all, or 17,712 males and 4,353 females. The Germans formed nearly half of the foreign element, there having been 6,976 males and 2,589 females, or 9,563 persons in all from the German Empire. Scandinavians, with 3,237 males and 160 females—a total of 3,397—came next, and the French, of whom there were 2,030—

INCREASE OF POPULATION

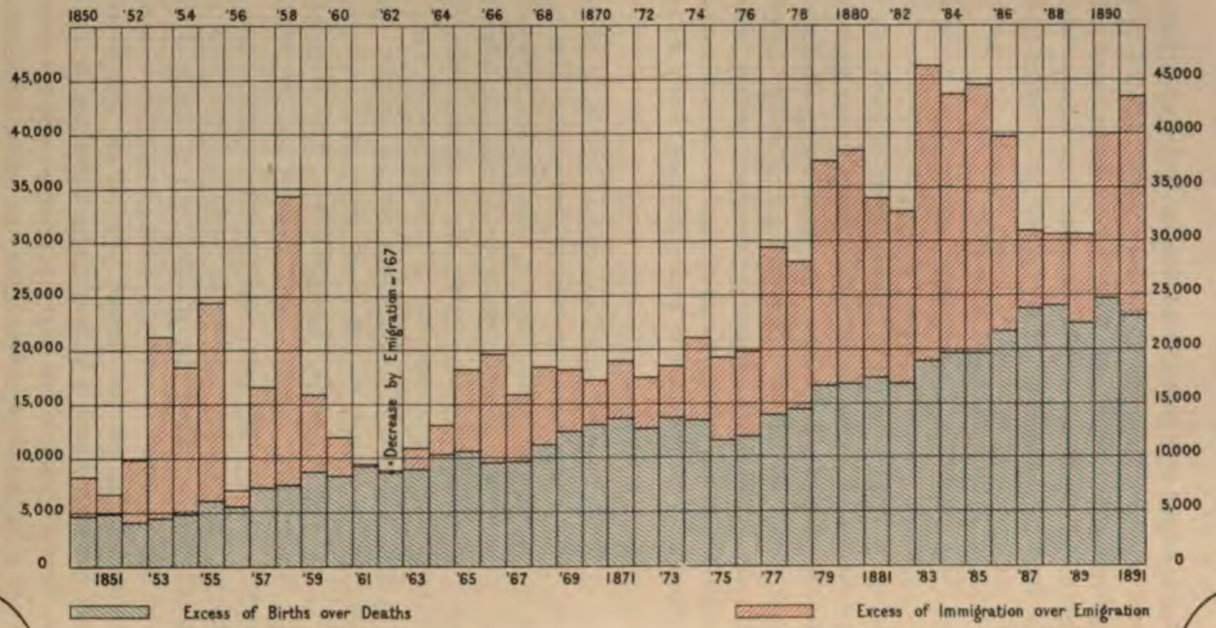

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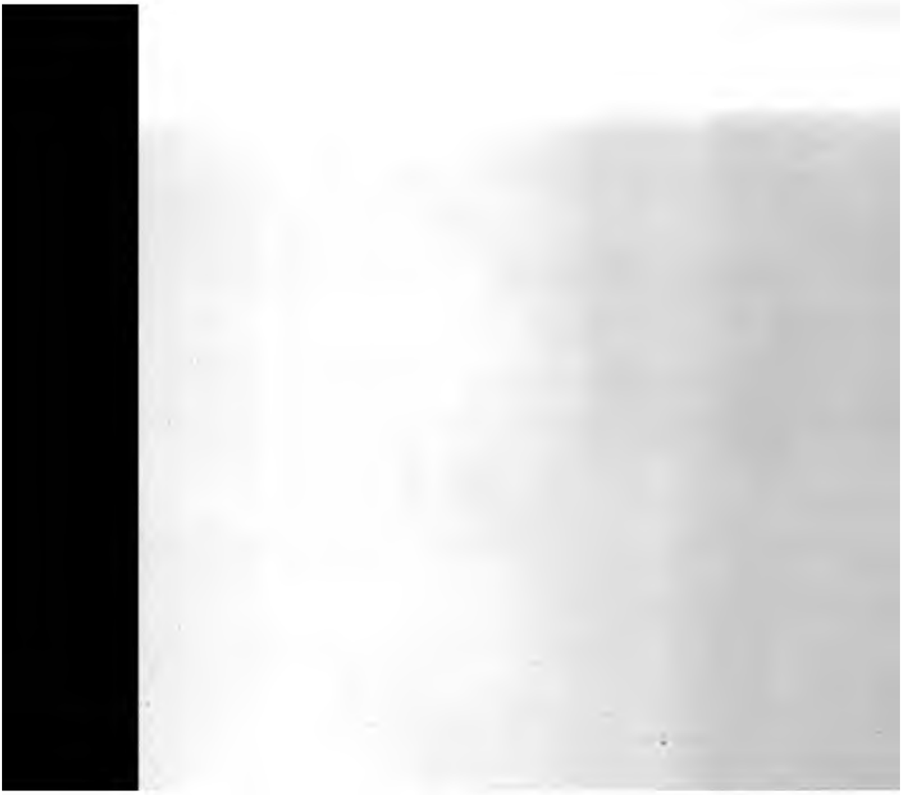
PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.



1,585 males and 445 females—came third. Of Danes, there were 1,480 altogether—1,268 males and 212 females—and the total number of Italians was only 3 short of the Danes—for there were 1,229 males and 248 females, making 1,477 in all. Of Swiss, there were 594, of whom exactly 100 were females; there were 588 persons born in Austria and Hungary, 534 of whom were males and 54 females. The number of Dutch was the same as the number of Greeks—255, but in the case of the former there were 228 males and 27 females, while in the latter case there were 241 males and 14 females. The European Turks numbered 242, including 73 females to 169 males, and there were 136 Asiatic Turks, of whom 111 were males and 25 females. Of Portuguese, there were 159 males and 14 females, making a total of 173, and Spaniards numbered 111 all told, or 76 males and 35 females. In addition to those mentioned above there were persons born in the colonies or dependencies of most of the countries mentioned, but the numbers of these were insignificant, with the exception of New Caledonia, which contributed 148, or 76 males and 72 females, to the population of New South Wales.

Natives of Asia

Foreigners from the continent of Asia numbered 13,616, all of whom were males with the exception of 188; and nearly 99 per cent. of these Asiatics were Chinese, the numbers recorded being 13,048 males and only 109 females, making 13,157 in all. Of the remainder there were 151 Arabians—144 males and 7 females—and 80 Japanese, of whom 69 were males and 11 were females. There were 20 Afghans, all males; 3 from Siam—2 males and 1 female; 2 Persians (males); 3 Indians, 2 of whom were males and 1 female; and 3 males and 2 females who entered their birthplace simply as Asia, without specifying what part.

Natives of Africa.

There were but 195 Africans in the Colony, 29 of whom came from Egypt, 20 being males and 9 females. One female came from Madagascar, 3 males from Abyssinia, 26 males from Zanzibar, and 1 female from the Transvaal. Three persons, 2 of whom were males and 1 female, were natives of the West Coast;

2 females came from Morocco, and 1 from Central Africa. There were also 87 males and 42 females, making 129 altogether, who stated their place of birth simply as Africa, without mentioning the particular locality.

Natives of America.

American foreign countries contributed 3,662 persons, of whom there were 2,695 males and 927 females, to the population of New South Wales. Nearly 94 per cent. of the total number were from the United States, consisting of 2,509 males and 870 females, or 3,397 altogether. There were 16 Mexicans, 3 of whom were females; 19 came from West Indian islands, only 2 of whom were females; 42 males and 3 females came from Brazil, and 41 males and 12 females were Chilians. Seventy-six persons, 51 of whom were males and 25 females, vaguely entered their birthplace as South America, and 3 males stated they were born in Central America. Polynesians numbered 486, of whom 369 were males and 117 were females. Thirty foreign subjects were born at sea, and 5 foreigners failed to record their birthplace. The 1,223 unspecified persons, already mentioned, consisted of 939 males and 284 females.

Proportion of foreigners.

The following table shows the proportion per cent. that each element of the population bore to the whole community at the four census periods 1861, 1871, 1881, and 1891 :—

Year.	Proportion of Total Population.			
	Natives of New South Wales.	Natives of other Australasian Colonies.	Other British-born Subjects.	Foreigners.
1861	45·69	1·34	46·18	6·79
1871	58·57	2·67	34·85	3·91
1881	62·17	5·95	27·97	3·91
1891	64·76	7·50	24·21	3·53

Racial composition of the people.

Further details respecting the racial composition of the people at the same periods will be seen in the following table:—

Nationality.	1861.	1871.	1881.	1891.
	per cent.	per cent.	per cent.	per cent.
New South Wales..................	45·69	58·38	61·95	64·03
Other Australasian Colonies..	1·34	2·67	5·95	7·50
Aborigines	......	0·19	0·22	0·73
English	23·98	17·33	14·32	13·18
Irish	15·63	12·49	9·21	6·63
Scotch	5·19	3·98	3·34	3·25
Welsh	0·39	0·37	0·41	0·44
Other British Subjects.........	0·99	0·68	0·69	0·71
Total, British Subjects...	93·21	96·09	96·09	96·47
Chinese	3·70	1·43	1·36	1·16
German	1·56	1·31	1·00	0·84
Other Foreigners	1·53	1·17	1·55	1·53
Total, Foreigners	6·79	3·91	3·91	3·53

CENTRALIZATION OF POPULATION.

Tendency of population towards cities.

One of the most notable problems in the progress of modern civilization is the tendency, everywhere exhibited in the chief countries of the world, of the population to accumulate in great cities. Not only is this apparent in England, France, and other countries, where the development of manufactures has brought about an entire change in the employment of the people, and has necessarily caused their aggregation in towns, but it is seen also in the United States, the most favoured country for the agricultural labourer. It is noticed, too, that in all new countries there is a tendency for immigrants to locate themselves in and near the great cities, and this Colony is no exception to the rule.

Proportion of native-born increasing.

As far back as 1861, when the native-born population amounted to only 45·69 per cent. of the whole colony, the number living in Sydney and its suburbs formed only 42·13 per cent. of the total, while British born colonists, amounting to 46·18 per cent. of the population, constituted 52·93 per cent. of the metropolitan population. In 1891 the native-born formed 64·76 per cent. of the total population, but the proportion of native-born resident in the metropolitan area had risen to 58·63 per cent., and the proportion of British-born had declined to 30·51 per cent. No great difference is observable between the proportion of persons attracted to New South Wales from other colonies who remained in Sydney during late years, and those who made the country districts their home. What difference there is favours the supposition that the metropolis has proved more attractive. The non-British population have, as a rule, preferred the country districts to Sydney; but of late years there has been a tendency on the part of certain foreign elements to gravitate towards Sydney; this is especially noticeable amongst Chinese and Hindoos, as well as Syrians and others from the Levant.

Metropolitan population.

The proportion per cent. which each element of the city population bore to the whole metropolitan population at the last four censuses is shown in the following figures :—

Year.	Proportion of Metropolitan Population.			
	Natives of New South Wales.	Natives of other Australasian Colonies.	Other British-born subjects.	Foreigners.
1861	42·13	1·77	52·93	3·17
1871	54·24	3·07	40·22	2·47
1881	56·87	6·18	33·62	3·33
1891	58·63	7·26	30·51	3·60

Comparison of colonies with America.

The conditions of progress in these colonies approximate somewhat to those of the United States, and a comparison between the increase of town population there and in New South Wales is not without interest. The great defect in the comparison arises from the fact that in America there exist many large cities; in New South Wales there is practically only one. The population of the

United States for three periods, and the proportion of rural to city population, will be seen below :—

Year.	Population of the United States.	Population of Cities of United States.	Percentage of whole population in Cities.
1860	31,443,321	5,072,256	16·1
1870	38,558,371	8,071,875	20·7
1880	50,155,783	11,318,547	22·5

Causes which lead to increase in cities.

The rapid increase of city population shown above has given rise to considerable speculation. It seems an established fact that the movement of population towards the towns in the old countries of the world is a sign of a desire for improvement in the circumstances manifested by the ruder population; for, like every other commodity, labour gravitates to the market where it will obtain the highest price. In America the increase in town population has been derived mainly from abroad; and there seems no reason to suppose that, large as the proportion of urban population has become, it has reached an unhealthy stage. In Australasia, however, the case is different, and it is impossible to believe that healthy progress is consistent with the wonderful growth of the metropolis at the expense of the country. Over 57 per cent. of the increase due to immigration in New South Wales during the period 1881–91 was retained in the metropolis.

Urban and rural population.

In this colony the proportion of town population is even more remarkable than in the United States, as will be seen from the table here given, showing the percentage of population of Sydney and suburbs as compared with New South Wales as a whole :—

Year.	Metropolitan.	Country.
	per cent.	per cent.
1861	26·70	73·30
1871	26·73	73·27
1881	30·34	69·66
1891	34·26	65·74

Population of Victoria.

In regard to the neighbouring Colony of Victoria, the figures are :—

Year.	Metropolitan.	Country.
	Per cent.	Per cent.
1861	25·89	74·11
1871	28·87	71·13
1881	32·81	67·19
1891	42·49	57·51

Proportion of urban population.

In the table of urban population of the United States on the preceding page, is included all towns exceeding 8,000 inhabitants; nevertheless, the proportion to the whole is much less than in either New South Wales or Victoria. The case of Melbourne is even more marked than that of Sydney; for during the period comprised in the table, the former city increased proportionately more than the latter, as compared with the population of its colony, and its numerical increase has also been greater. The following figures show the population of the city and suburbs of Sydney and Melbourne :—

Year.	Sydney.	Melbourne.
1861	95,596	139,860
1871	136,483	206,780
1881	237,300	296,347
1884	277,630	349,166
1885	292,550	368,788
1886	308,270	389,512
1887	324,830	411,400
1888	342,280	434,519
1889	360,670	458,937
1890	380,040	484,630
1891	399,270	491,942

Extraordinary progress of Sydney and Melbourne.

The progress of these cities has been extraordinary, and has no parallel amongst the cities of the Old World. Even in America the rise of the great cities has been accompanied by a somewhat corresponding increase in the rural population. In these colonies, perhaps for the first time in the history of the world, is seen the spectacle of magnificent cities growing with wonderful rapidity, and embracing within their limits one-third of the population of the territory on which they depend. The chief cities of the other Australian colonies present somewhat similar features to Sydney and Melbourne, but with the exception of Adelaide, which contains nearly two-fifths of the whole population of South Australia, they are not so large in proportion to their rural population as either Sydney or Melbourne.

Population of Australasian cities.

The population of the chief cities of the Australasian Colonies is given below :—

City.	Population, 31st December, 1891.
Sydney	399,270
Melbourne	491,942
Adelaide	132,575
Brisbane*	93,657
Wellington	33,682
Hobart	33,972
Perth	10,040

* Census population.

Wellington, the capital of New Zealand, is not the most populous city in that colony ; Auckland, which was the seat of Government and the capital until 1865, contains a much larger population, the census of 1891 giving a total of 51,287 persons.

Growth of Sydney.

Sydney stands alone amongst Australian cities for convenience of position and natural advantages for external and internal trade, and the progress it has made in wealth and population has not been less than expectation warranted. The growth of population within the municipal boundaries of the city forms an interesting feature in the progress of the colony. In the table given below the population set down for the years previous to 1871 is that ascertained at the date of different censuses; from 1871 the figures show the estimated population at the close of the year :—

Year.	Persons.	Year.	Persons.	Year.	Persons.	Year.	Persons.
1828	10,815	1871	77,680	1879	98,824	1887	121,160
1833	16,232	1872	79,455	1880	102,160	1888	118,020
1836	19,729	1873	81,482	1881	106,580	1889	114,960
1841	29,973	1874	83,631	1882	110,110	1890	111,980
1846	38,358	1875	85,267	1883	115,850	1891	109,090
1851	44,240	1876	87,261	1884	121,440		
1856	53,358	1877	91,008	1885	122,910		
1861	56,394	1878	94,228	1886	124,380		

Growth of metropolitan population.

At the census of 1861 the population of the whole metropolis was 95,596; ten years later it had risen to 136,483; while at the census of 1881 the number had reached 224,211; and at the census of 1891 the number of persons in Sydney and its suburbs had increased to 386,859. The progress of the population in the city and suburbs will be found in the following table, which shows the estimated population of the Metropolitan and Country Districts, and of New South Wales, on the 31st December of each year, 1882–91 :—

Year.	Metropolitan.			Country.	New South Wales.		
	City.	Suburbs.	Total.		Males.	Females.	Total.
1882	110,110	139,940	250,050	564,950	447,100	367,900	815,000
1883	115,850	147,630	263,480	597,830	473,980	387,330	861,310
1884	121,440	156,190	277,630	627,350	498,310	406,670	904,980
1885	122,910	169,640	292,550	657,020	523,030	426,540	949,570
1886	124,380	183,890	308,270	681,070	543,260	446,080	989,340
1887	121,160	203,670	324,830	695,500	558,350	461,980	1,020,330
1888	118,020	224,260	342,280	708,800	573,190	477,890	1,051,080
1889	114,960	245,710	360,670	721,150	589,010	492,810	1,081,820
1890	111,980	268,060	380,040	741,820	609,650	512,210	1,121,860
1891	109,090	290,180	399,270	766,030	630,870	534,430	1,165,300

Rate of increase in twenty years.

The increase of population during the twenty years which closed with 1891 has been 181 per cent. for the metropolis, while that of the country districts amounted to 104 per cent. The population of the whole colony has more than doubled itself during this period; the total for 1891 showing an increase of 125 per cent. on the total for 1871.

Area of the metropolis.

The area of the metropolitan district incorporated is nearly 120 square miles, or 76,417 acres, so that the average density of population at the end of the year was 5 persons per acre, some of the more immediate suburbs being almost as densely populated as the city itself. The area of land permanently dedicated for public recreation in the metropolis comprises 3,761 acres (776 acres in the city, and 2,985 in the suburbs; this includes the Centennial Park, the area of which is about 780 acres), equal to nearly one twentieth of the total extent of the district, which must certainly be looked upon as a very liberal provision for the maintenance of public health. This is quite apart from the National Park, an area of 36,320 acres, which is within an hour's journey by train of the city. The area of Melbourne and suburbs is 163,942 acres, or about 256 square miles, and the population at the end of the year 1891 was 491,942; this shows a density of population of 3 persons to the acre. The area taken for Melbourne is an arbitrary one, being the land included within a radius of 10 miles of the centre of the city. An area of 256 square miles around Sydney would include Parramatta, Hunter's Hill, Ryde, and surroundings, and would at the close of 1891 have embraced a population of probably not fewer than 440,000—a number less by 50,000 than the Melbourne metropolitan population.

Suburbs of Sydney.

The suburbs of Sydney consist of the following districts, which are here grouped according to locality:—*North-western*—Balmain, Leichhardt, Glebe; *West Central*—Newtown, St. Peters, Camperdown, Macdonaldtown; *East Central*—Redfern, Darlington, Waterloo, Alexandria, Botany; *Eastern*—Paddington, Randwick, Waverley, Woollahra; *Western*—Ashfield, Burwood, Five Dock, Drummoyne, Marrickville, Petersham; *Southern*—Canterbury, Hurstville, Kogarah, Rockdale; and *North Shore*—North Sydney, Manly, Ryde, and Hunter's Hill.

Suburban population.

The census returns of 1891 showed that the population of the suburbs had more than doubled itself since the census of 1881. The increase has been general, varying from 77 per cent. in the east central districts of Redfern, Waterloo, &c., to 214 per cent. in the western and southern suburbs, which constitute the *electorate* of Canterbury :—

Suburbs.	Population, 1881.	Population, 5th April, 1891.	Increase per cent.
North-western	27,785	57,617	107
West central	15,991	34,663	117
East central	25,664	45,460	77
Eastern	20,220	43,493	115
Western	18,129	50,478	178
Southern	2,033	12,837	531
North Shore	11,010	30,611	178

Municipalities.

The suburbs of Sydney comprise thirty-five distinct municipalities. The population of those in existence at the date of the census of 1881 and at that of 1891, will be found below :—

Municipality.	Population at Census of 1881.	Population 5th April, 1891.	Municipality.	Population at Census of 1881.	Population 5th April, 1891.
Alexandria	3,449	7,505	Macdonaldtown	1,870	5,275
Ashfield	4,087	11,697	Manly	1,327	3,236
Balmain	15,063	23,475	Marrickville	3,501	13,507
Botany	......	2,060	Newtown	8,327	17,870
Botany, North	......	2,407	North Willoughby	1,411	3,411
Burwood	2,472	6,227	North Sydney	7,149	17,106
Camperdown	3,522	6,658	Paddington	9,608	18,392
Canterbury	1,175	2,426	Petersham	3,413	10,369
Concord	......	2,107	Randwick	2,079	6,236
Darlington	2,026	3,465	Redfern	10,868	21,322
Drummoyne	......	1,451	Rockdale	858	4,908
Enfield	......	2,050	Ryde	1,673	3,225
Five Dock	888	1,250	St. Peter's	2,272	4,860
The Glebe	10,500	17,075	Strathfield	......	1,820
Hunter's Hill	2,282	3,633	Waterloo	5,762	8,701
Hurstville	......	3,175	Waverley	2,365	8,842
Kogarah	......	2,328	Woollahra	6,168	10,023
Leichhardt	1,866	17,067			

Municipalities outside the metropolis.

At the time of the census of 1881 there were only sixty boroughs and municipalities outside the metropolis, but now there are one hundred and thirty-one. The following are their names and the most recent estimates of population :—

Country Municipalities.	Population.	Country Municipalities.	Population.	Country Municipalities.	Population.
Adamstown	2,030	Greta	1,751	Parkes	2,449
Albury	5,447	Gulgong	1,283	Parramatta	11,677
Armidale	3,826	Gundagai	948	Penrith	3,797
Auburn	2,026	Gunnedah	1,362	Plattsburg	3,301
Ballina	1,084	Hamilton	4,844	Port Macquarie	961
Balranald	637	Hay	2,741	Prospect and Sherwood	2,075
Bathurst	9,162	Hill End	814	Queanbeyan	1,262
Bega	2,023	Hillston	734	Quirindi	1,139
Berry	908	Illawarra, Central	3,247	Raymond Terrace	899
Bingara	738	,, North	2,515	Richmond	1,242
Blayney	1,254	Inverell	2,534	Rookwood	2,084
Bombala	1,101	Jamberoo	2,235	Scone	876
Bourke	3,149	Jerilderie	541	Shellharbour	1,587
Bowral	2,258	Junee	1,682	Shoalhaven, Central	451
Braidwood	1,496	Katoomba	1,592	Silverton	1,397
Broken Hill	19,789	Kempsey	2,194	Singleton	1,793
Broughton Vale	424	Kiama	2,302	,, South	802
Burrowa	767	Lambton	3,436	Smithfield and Fairfield	1,392
Camden	1,303	,, New	1,548	St. Mary's	1,823
Campbelltown	2,381	Lismore	2,925	Stockton	2,417
Carcoar	562	Lithgow	3,865	Tamworth	4,602
Carrington	2,137	Liverpool	4,463	Taree	716
Casino	1,486	Maclean	907	Temora	915
Cobar	1,189	Maitland, East	2,919	Tenterfield	2,477
Condobolin	742	,, West	7,295	Tumut	1,275
Cooma	1,729	Merewether	4,339	Ulladulla	1,582
Coonamble	1,141	Mittagong	1,468	Ulmarra	1,592
Cootamundra	2,026	Moama	716	Uralla	819
Coraki	538	Molong	1,112	Wagga Wagga	4,596
Cowra	1,546	Moree	1,143	Walcha	864
Cudal	447	Morpeth	1,138	Wallsend	3,644
Cudgegong	2,519	Moruya	1,236	Waratah	2,718
Deniliquin	2,273	Moss Vale	1,240	Wellington	1,545
Dubbo	4,555	Mudgee	2,410	Wentworth	801
Dundas	792	Murrumburrah	1,226	Wickham	6,582
Ermington and Rydalmere	774	Murrurundi	1,254	Wilcannia	1,287
Forbes	3,011	Musclebrook	1,298	Windsor	2,033
Gerringong	1,534	Narrabri	1,977	Wingham	494
Glen Innes	2,532	Narrandera	1,815	Wollongong	3,041
Gosford	685	Newcastle	12,914	Yass	1,770
Goulburn	10,916	Nowra	1,705	Young	2,746
Grafton	4,445	Numba	688		
Granville	4,248	Nyngan	1,355		
Grenfell	745	Orange	3,237		
		,, East	1,827		

Population densest along seaboard.

The great bulk of the population dwells along the seaboard. Outside the metropolis the most thickly peopled districts are the fertile valleys of the rivers. Amongst these, in point of population, the Hunter River valley, with large agricultural and mining industries, stands first. The Illawarra district, rich in coal and pasture, comes next; then the maize and sugar-growing country of the Clarence and the Richmond. The settlement of population originally followed the main roads of the Colony, and is now drawn to the great trunk lines of railway, which have almost superseded them.

MARRIAGES.

Marriage rate declining.

The number of marriages registered in the Colony shows an uninterrupted annual increase from 1875 to 1886; in 1887 and 1889, however, there was a falling off, while during 1891 there were more marriages than in any previous year. The rate per 1,000 of population had been declining during the period from 1883 to 1889, but 1890 presented a slight improvement, which was continued in 1891. The following are the figures showing marriages in New South Wales for the last twenty years :—

Year.	Marriages registered.	Per 1,000 of mean population.	Year.	Marriages registered.	Per 1,000 of mean Population.
1872	3,925	7·45	1883	7,405	8·83
1873	4,384	8·05	1884	7,482	8·47
1874	4,343	7·69	1885	7,618	8·22
1875	4,605	7·87	1886	7,811	8·06
1876	4,630	7·66	1887	7,590	7·55
1877	4,994	7·94	1888	7,844	7·57
1878	5,317	8·08	1889	7,530	7·06
1879	5,391	7·80	1890	7,876	7·15
1880	5,572	7·65	1891	8,457	7·39
1881	6,284	8·21			
1882	6,948	8·70	Mean for 20 years ...		7·87

Marriages in European countries.

Compared with some European countries the proportion of marriages to the whole population in the Colony appears somewhat less than might be anticipated, but it will be found that the circumstances of the countries where marriages are more largely entered into are entirely dissimilar, and the national habits different from our own. The highest European marriage-rate is found in the dominions of the two great empires, Germany and Austria, as the following table will show. The ratios for Prussia and the rest of Germany, and for Hungary and the other portions of Austria, are given separately. Their mean marriage-rates since 1870 have been declining year by year; and reference to the table will show that the average rate for each during 1881–90 was lower than the average for the twenty years prior to 1881. The marriage-rate of the United Kingdom is always much the same as that of the Australasian Colonies, in spite of the comparatively few marriages solemnized in Ireland. The information in the following table is taken from the report of the Registrar-General of England :—

Marriages in United Kingdom.

Countries.	Mean of 20 years, 1861–80.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	Mean of 10 years.
England and Wales	8·2	7·6	7·7	7·7	7·5	7·2	7·1	7·2	7·2	7·5	7·7	7·4
Scotland	7·1	7·0	7·0	7·0	6·7	6·5	6·2	6·2	6·3	6·4	6·8	6·7
Ireland	4·9	4·3	4·3	4·3	4·5	4·3	4·2	4·4	4·2	4·5	4·4	4·3
France......... ...	7·9	7·5	7·4	7·5	7·6	7·5	7·4	7·3	7·2	7·1	7·0	7·3
Spain	7·2	6·4	6·0	6·3	6·7	...	...	...	...	...	...	6·4
Switzerland ...	7·6	6·8	6·8	6·8	6·8	6·9	6·8	7·1	7·0	7·0	7·1	6·9
Italy	7·6	8·1	7·9	8·0	8·2	7·9	7·8	7·8	7·8	7·5	7·4	7·9
German Empire	8·7	7·5	7·7	7·7	7·8	7·9	7·9	7·8	7·8	8·0	8·0	7·8
Prussia	8·6	7·6	7·9	7·9	8·0	8·2	8·1	8·0	8·0	8·2	8·2	8·0
Austria	8·6	8·0	8·2	7·9	7·8	7·6	7·8	7·8	7·9	7·5	7·5	7·9
Hungary	10·3	10·0	10·3	10·4	10·2	10·0	9·5	9·0	9·2	8·0	...	9·6
Holland	8·1	7·3	7·2	7·1	7·2	6·9	6·9	7·0	6·9	6·9	7·1	7·1
Belgium	7·3	7·1	7·0	6·7	6·7	6·8	6·7	7·1	7·3	7·2	7·4	7·0
Denmark.........	7·6	7·8	7·7	7·7	7·8	7·6	7·1	7·0	7·1	7·1	6·9	7·4
Norway	7·2	6·4	6·7	6·6	6·8	6·7	6·5	6·3	6·2	6·2	6·5	6·5
Sweden	6·7	6·2	6·4	6·4	6·5	6·6	6·4	6·3	5·9	6·0	...	6·3

The means for the series of years prior to 1881 are not for the full period of twenty years for all the countries above mentioned. In the case of Ireland the rate is the average from 1864 to 1880; Spain, 1861 to 1878; Switzerland, 1868 to 1880; Italy, 1863 to 1880; German Empire, 1872 to 1880; Hungary, 1866 to 1880; and Norway, 1871 to 1880. It must be borne in mind that the above are the ratios of *marriages* to population; to ascertain the ratios of *persons* married it is therefore necessary to double the figures in each case.

Circumstances of Australia induce marriages.

But no one of the European countries referred to above is to any great extent similar to the Australasian Colonies in its social customs, or in the prosperity of the great bulk of its people. The nearness of the marriage-rate of the United Kingdom to that of Australasia is accidental, as the circumstances of the two countries are very dissimilar. In the former case there is a large excess of female population, due to the emigration of males, while in these colonies the preponderance is greatly on the side of the males. Besides this, the social condition of the working-classes, in even the least forward of the Australasian Colonies, is much more advanced than in the British Islands; the probabilities are therefore greatly in favour of a higher marriage-rate in these colonies.

Lowest marriage-rate in New Zealand.

The lowest marriage-rate of any of the Colonies is found in New Zealand, and the highest, taking a series of years, in Queensland. The rates per 1,000 of the population during the last ten years, which will be found hereunder, show that the average of the whole of the colonies has been approximately 7·52.

The Colonies whose rates are equal to or above the average are:—

Queensland	8·54
New South Wales	7·90
Victoria	7·83
Tasmania	7·52

Those below the average are :—

South Australia	7·37
Western Australia	7·10
New Zealand	6·37

The marriage rates of each Colony for the last ten years were as follow :—

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.	Marriage-rate of all Colonies.
1882	8·70	7·09	8·59	8·75	7·04	8·10	7·09	
1883	8·83	7·44	8·97	8·53	6·89	9·15	6·86	
1884	8·47	7·74	8·98	8·33	7·02	8·00	6·93	
1885	8·22	7·73	9·32	7·86	7·37	8·23	6·72	
1886	8·06	7·86	8·44	6·36	7·73	7·56	5·99	
1887	7·55	7·64	8·40	6·33	7·44	7·03	5·98	
1888	7·57	8·48	8·94	6·65	6·90	6·95	6·00	
1889	7·06	8·43	8·27	6·56	6·77	6·92	5·95	
1890	7·15	8·21	8·22	7·02	5·89	6·67	6·11	
1891	7·39	7·66	7·23	7·31	8·00	6·63	6·04	
Mean...	7·90	7·83	8·54	7·37	7·10	7·52	6·37	

Marriages in each Colony of Australasia.

The following are the numbers of marriages registered in each of the colonies during the years 1876 to 1891:—

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1876	4,630	4,949	1,394	1,852	191	746	3,196
1877	4,994	5,103	1,447	2,002	176	831	3,114
1878	5,317	5,092	1,444	2,299	182	866	3,377
1879	5,391	4,986	1,604	2,238	215	804	3,352
1880	5,572	5,286	1,547	2,291	214	840	3,181
1881	6,284	5,896	1,703	2,308	197	856	3,277
1882	6,948	6,309	2,034	2 530	215	969	3,600
1883	7,405	6,771	2,392	2,539	217	1,120	3,612
1884	7,482	7,218	2,661	2,555	230	1,003	3,800
1885	7,618	7,395	2,842	2,447	256	1,054	3,813
1886	7,811	7,737	2,785	1,976	297	985	3,488
1887	7,590	7,768	2,914	1,977	316	939	3,563
1888	7,844	8,946	3,254	2,084	304	951	3,617
1889	7,530	9,203	3,123	2,062	300	967	3,630
1890	7,876	9,187	3,195	2,235	278	954	3,797
1891	8,457	8,780	2,905	2,315	413	988	3,805

Factors influencing marriages.

So far as these colonies are concerned, the factors influencing the marriage-rate are—first, and chiefly, the general prosperity of the community; secondly, the number of marriageable males, and the occupations of the people. Judged by certain standard tests, which are elsewhere described, the prosperity of the people of New South Wales was perhaps greater than that of any of the other colonies during the period from 1880 to 1886; hence the high marriage-rate for that period compared with most of the other colonies. During some of the succeeding years the material condition of the working population of the colony has not been so satisfactory, and the marriage-rate during these years shows a marked decline.

Large number of single men in New South Wales.

The number of single men (bachelors and widowers) of marriageable age was, numerically, larger in New South Wales than in any of the other colonies, but, proportionately to the whole population, larger only than in Victoria, Tasmania, South Australia, and New Zealand during the year 1891. Under similar conditions it would, therefore, be natural to suppose that, were it not for the greater material prosperity of New South Wales, the marriage-rates of the remaining colonies would have been higher than in this Colony. Such, however, was not the case, for, as mentioned above, the rate for New South Wales is exceeded only by Queensland, over a series of years.

Number of persons signing with marks.

The number of persons signing the marriage register with marks has steadily declined for many years past; the proportion of signatures made with marks was, in 1871, 16·96 per cent. of the whole, while in 1891, the percentage had fallen to 3·08, thus showing a satisfactory decrease of illiteracy. The greatest number of persons signing with marks was recorded in the country districts of the Colony, where, in 1871, 18·92 per cent. of the total signatures were so made, as against 13·94 in the city, and 10·98 in the suburbs of Sydney. The proportion of persons unable to write is still much higher in the country than in the metropolis, though it is satisfactory to note the reduction of the percentage from 18·92 in the year mentioned to 3·08 in 1891. The following

Illiteracy greater in country.

table shows the percentage of marks to total signatures of persons signing Marriage Registers for twenty years:—

Year.	Metropolis.			Country Districts.	New South Wales.
	City of Sydney.	Suburbs.	Total.		
1872	11·47	8·22	10·77	15·09	13·62
1873	10·73	8·38	10·26	16·53	14·26
1874	10·12	7·93	8·81	15·85	11·96
1875	10·67	3·28	8·77	14·21	12·26
1876	7·63	3·56	6·54	16·71	10·47
1877	8·30	5·85	7·58	11·10	9·76
1878	7·16	4·59	6·36	9·21	8·10
1879	6·42	4·34	5·70	8·85	7·58
1880	6·58	3·97	5·76	7·31	6·66
1881	5·41	4·24	5·05	8·34	6·94
1882	6·17	3·47	5·19	6·00	5·63
1883	5·00	4·00	4·60	7·28	6·10
1884	3·60	3·12	3·40	6·77	5·23
1885	3·76	2·03	3·34	5·99	4·74
1886	3·63	1·90	2·89	5·00	3·98
1887	2·85	1·23	2·12	4·68	3·50
1888	3·51	1·84	2·75	4·55	3·74
1889	3·09	1·59	2·39	4·13	3·35
1890	1·71	1·52	1·63	3·56	2·70
1891	2·43	2·08	2·26	3·78	3·08

Illiteracy of women.

The amount of illiteracy, as displayed by inability to write, has for many years been greater amongst females than males. The next table shows that such was the case in every year since 1871, with the exception of the last two years, from which it would appear that women are now quite on a par with men in the acquirement of the rudiments of education. In 1871, the first year shown on the foregoing table, the number of women unable to sign their names, who were married, amounted to nearly one-fifth of the whole, but the proportion fell to 2½ per cent. in 1890.

The following table gives the percentage of males and females signing the marriage registers with marks for every year since 1871:—

Year.	Males signing with marks, per cent.	Females signing with marks, per cent.	Year.	Males signing with marks, per cent.	Females signing with marks, per cent.
1871	14	19	1882	5	6
1872	11	15	1883	5	6
1873	12	15	1884	4	5
1874	10	13	1885	4	5
1875	10	13	1886	4	4
1876	9	11	1887	3	4
1877	8	11	1888	4	3½
1878	7	8	1889	3½	3
1879	6	8	1890	2¾	2½
1880	6	7	1891	3¼	3
1881	5	8			

The greater number of marriages are solemnized by the clergy; nevertheless, the number of persons married by registrars is fairly

Marriages chiefly by clergy.

large, averaging 6·09 per cent. of the whole, during the past twenty years, as shown by the following figures :—

Year.	Marriages by Clergy.	Marriages at Registrars' offices.	Year.	Marriages by Clergy.	Marriages at Registrars' offices.
1872	95·13	4·87	1884	92·82	7·18
1873	95·92	4·08	1885	93·30	6·70
1874	95·21	4·79	1886	93·18	6·82
1875	94·56	5·44	1887	93·31	6·69
1876	94·06	5·94	1888	93·49	6·51
1877	93·93	6·07	1889	93·24	6·76
1878	94·19	5·81	1890	93·00	7·00
1879	94·03	5·97	1891	93·65	6·35
1880	94·29	5·71			
1881	93·76	6·24	Average for 20 years ...	93·91	6·09
1882	93·75	6·25			
1883	93·44	6·56			

Church of England and Roman Catholic marriages.

As may naturally be expected, the largest number of marriages were celebrated by the Church of England, the Roman Catholic Church coming next ; but the percentage of marriages celebrated by each of these Churches falls short of what might have been anticipated from their strength as shown by the census. This is noticeably the case with the Roman Catholic Church. The adherents of this denomination at the census of 1891 were 25·34 per cent. of the population, whereas the marriages solemnized according to its rites during the year 1891 were only 17·86 per cent. of the whole marriages. To bring the number of Roman Catholic marriages up to the proper proportion they should increase at least 40 per cent. It is plain, therefore, that the adherents of this Church either do not marry within their own communion, or

Roman Catholic marriages.

that they do not undertake the responsibilities of marriage to the same extent as other members of the community. The latter supposition is doubtless the correct explanation of the anomaly; for the adherents of the Roman Catholic Church are amongst the poorest in the Colony, and want of means is, perhaps, the chief cause of the comparatively small number of their marriages, though it is undoubtedly true that what are termed "mixed" marriages are numerous.

Marriages by Church of England.

The disparity between the number of marriages solemnized by the clergy of the Church of England and what might be expected from the numerical strength of the denomination is not so great. During the year 1891 there were celebrated 3,323 marriages according to the rites of this Church, being 39·29 per cent. of the total marriages, while the percentage of its adherents, as shown by the census of that year, was 44·42. A glance at the following table will show that the number of marriages celebrated during 1891 by ministers of other denominations, notably the Presbyterian, Methodist, Congregational, and Baptist, far exceeded their apparent due proportions:—

Proportion of marriages by each denomination.

Denomination.	No. of Marriages.	Percentage of total Marriages.	Percentage of adherents to total population, census 1891.
Church of England	3,323	39·29	44·42
Roman Catholic	1,510	17·86	25·34
Presbyterian	1,142	13·50	9·66
Wesleyan and Primitive Methodist	1,167	13·80	9·69
Congregational	500	5·91	2·13
Baptist	118	1·40	1·16
Hebrew	23	0·27	0·48
Other Denominations	137	1·62	7·12
Registrars' Offices	537	6·35	

Marriages registered in the Colony, 1877–91.

Denomination.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.
Church of England...	1,869	2,098	2,182	2,252	2,487	2,768	2,949	2,893	2,990	2,987	3,056	3,134	2,885	3,126	3,323
Roman Catholic......	990	1,009	982	1,021	1,171	1,315	1,414	1,448	1,258	1,323	1,221	1,350	1,288	1,373	1,510
Presbyterian	854	821	722	768	872	955	950	1,009	1,155	1,147	1,030	977	979	965	1,142
Wesleyan..............	509	556	605	618	651	704	712	759	739	832	770	815	753	798	885
Primitive Methodist	110	94	111	101	146	134	157	165	193	207	227	256	271	256	282
Congregational...	243	291	331	364	433	516	565	484	532	554	536	534	546	540	500
Baptist	70	89	90	93	85	79	101	117	137	120	120	133	167	118	118
Hebrew...................	20	20	22	17	27	22	24	27	27	18	27	32	35	23	23
German Evangelical	20	11	13	9	13	14	10	18	26	17	20	28	28	23	17
Christians..............	3	11	7	9	3	5	3	9	8	31	34	35	28	28	...
Salvation Army	...	...	...	...	...	...	3	3	3	11	10	22	26	41	37
Other Denominations	3	8	4	2	4	2	31	13	40	31	31	17	15	34	83
Registrars' Offices...	303	309	322	318	392	434	486	537	510	533	508	511	509	551	537
Total......	4,994	5,317	5,391	5,572	6,284	6,948	7,405	7,482	7,618	7,811	7,590	7,844	7,530	7,876	8,457

CONJUGAL CONDITION.

Number of husbands and wives.

Out of the 1,123,954 persons who formed the census population of New South Wales exclusive of the 8,280 aborigines, there were 166,303 husbands, and 165,571 wives, in addition to 16,872 males and 25,787 females who had been married but had had their partners removed by death; there were also 178 males and 126 females who had been married but had had their union dissolved by means of the Divorce Court; and there were 423,445 males and 324,226 females who had never been married at all, including, of course, children under marriageable age. Besides these there were 1,205 males and 241 females in regard to whom no particulars as to their conjugal condition were entered in the census schedules. But out of the total number of husbands mentioned above there were 24,647 whose wives were away, and out of total number of wives there were 23,915 whose husbands were away. The absentees include those who were out of the Colony, those who were working or visiting at places other than where the wives resided, as well as those who were separated from their consorts altogether. Provision was made in the Census schedules for recording details respecting the age, birthplace, religion, &c., of every person in the Colony, and where husbands and wives were together of course a comparison of the number of each class can be made, though this is impossible in the case of those who were away from each other, for there are no means of knowing that a man in one part of the Colony was the husband of a woman in another place. Two of the husbands whose wives were absent from them were only 16 years of age, six were 17, thirteen were 18, twenty-one were 19, and fifty-nine were only 20. Of the wives whose husbands were away four were girls only 15 years of age, eighteen were 16 years old, forty-seven were 17, and over one hundred were only 18 years old. With regard to the 141,656 married couples who were together at the census-taking, some interesting particulars may be be gained from an inspection of the following table :—

AGES OF HUSBANDS.	AGES OF										
	14	15	16	17	18	19	20	21 and under 25.	25 and under 30.	30 and under 35.	35 and under 40.
16 years	...	...	...	...	...	...	...	...	...	...	...
17 ,,	...	...	...	...	1	1	1	...	...	...	...
18 ,,	..	...	..	1	4	...	2	1	...	...	...
19 ,,	...	...	4	8	19	15	7	12	4	...	...
20 ,,	...	2	7	15	26	39	47	70	5	1	...
21 and under 25	1	5	42	127	311	526	723	2,960	793	78	16
25 and under 30	...	3	25	95	293	540	840	7,324	9,349	1,647	231
30 and under 35	...	2	9	23	81	164	307	3,601	10,710	8,997	1,590
35 and under 40	...	...	3	6	24	44	81	1,009	4,661	8,601	6,782
40 and under 45	...	...	1	...	5	12	10	295	1,406	3,911	5,841
45 and under 50	...	...	1	...	4	3	4	102	531	1,626	3,214
50 and under 55	...	...	...	1	2	1	8	53	204	601	1,187
55 and under 60	...	...	...	1	...	1	2	19	64	190	400
60 and under 65	...	...	...	...	...	1	...	8	24	55	141
65 and under 70	...	...	...	..	...	...	...	4	15	23	46
70 and under 75	...	...	...	1	...	...	...	...	5	8	15
75 and under 80	...	...	...	...	...	...	...	...	2	2	5
80 and under 85	...	...	...	...	...	...	...	...	1	...	2
85 and under 90	...	...	...	...	...	...	...	...	..	...	1
90 and under 95	...	...	...	..	...	...	...	...	...	...	...
95 and under 100	...	...	...	...	...	...	...	...	...	...	...
100 and upwards	...	...	...	...	...	...	...	...	...	...	...
Not stated	...	...	...	...	1	1	1	4	5	7	2
Wives with husbands at home	1	12	92	278	771	1,348	2,033	15,462	27,779	25,747	19,473

Wives.														
40 and under 45.	45 and under 50.	50 and under 55.	55 and under 60.	60 and under 65.	65 and under 70.	70 and under 75.	75 and under 80.	80 and under 85.	85 and under 90.	90 and under 95.	95 and under 100.	100 and upwards.	Not stated.	Husbands with wives at home.
...	...	...	...	...	...	...	...	...	...	...	...	..	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...	69
...	...	...	...	...	...	...	...	...	...	...	...	...	...	212
8	1	...	...	...	...	...	...	...	...	...	...	...	1	5,592
45	12	4	2	...	1	...	...	...	...	...	...	...	7	20,418
251	50	16	4	2	...	...	...	...	...	...	...	...	6	25,813
1,261	274	54	16	10	4	1	...	...	...	...	...	...	7	22,838
4,886	935	197	46	9	2	2	2	...	...	...	...	...	7	17,567
4,940	4,143	806	152	27	8	2	1	...	...	...	...	...	8	15,572
2,435	3,778	2,886	617	139	22	4	2	...	...	...	...	...	5	11,945
918	2,003	2,580	2,085	438	108	25	5	1	1	...	...	...	3	8,844
353	636	1,355	1,682	1,367	301	83	17	2	1	...	...	...	1	6,027
105	208	376	707	804	613	172	32	4	...	...	...	...	1	3,110
41	73	212	268	462	482	370	93	12	3	...	...	...	...	2,045
7	8	28	64	125	185	188	254	95	21	2	1	...	...	987
1	9	19	43	71	62	87	80	23	2	2	1	...	...	403
...	...	2	12	6	18	23	17	6	3	1	1	...	...	90
1	...	1	2	1	1	8	3	5	2	2	...	...	...	26
...	...	...	...	1	...	3	...	1	2	...	2	...	...	9
...	...	...	1	1	...	...	...	1	...	...	...	...	...	3
3	...	3	2	...	...	...	...	...	...	...	...	...	46	75
15,255	12,130	8,539	5,703	3,463	1,807	968	506	150	35	7	5	...	92	141,656

Discrepancies in ages of married people.

It will be seen from the foregoing table that while the majority of marriages were contracted between people of suitable ages, there were nevertheless some discrepancies and anomalies. It will be remarked that there was one wife only 14 years of age, but her husband was between 21 and 25 years old. Two children of 15 had husbands between 30 and 35, and two girls of 16 were married to men between 40 and 50. A still wider disparity is observable in the case of a girl of 17 married to a man between 70 and 75; two other girls of this age have spouses between 50 and 60 years old. Among the wives 19 years of age there were three with husbands between 50 and 65. One woman between 25 and 30 years was mated to a man over 80 years of age, and another woman between 35 and 40 years old had a husband of from 85 to 90 years. In some instances, also the wives were much older than the husbands, as in the case of the two wives between 75 and 80 whose partners were between 40 and 45; another woman between 70 and 75 had a husband of from 35 to 40; and another, between 65 and 70, was mated to a man under 30 years of age. The three oldest husbands were each over 100 years; the oldest wives were five between 95 and 100 years of age. The youngest husbands were three of 17 years, each of whom was married to a girl slightly older than himself; in fact the united ages of the three couples only amounted to 108. The youngest wife was 14 years old; there were twelve of 15 years, and ninety-two only 16 years of age. Seventy-five husbands and ninety-two wives made no statement as regards their age.

Average age.

The average age of husbands was 41·25 years, and of wives 37·25 years, showing a difference of four years in favour of the wives. The average age of widows was 55 years, but there were 25 widows of 20 and under; 3,106 from 20 to 40 years; 11,435 from 40 to 60 years; and 11,133 over 60 years.

The following tables show the religious professions and the birthplaces of the 141,656 married couples who were living together when the Census was taken:—

Religions of Husbands.	Religions of Wives.											Husbands with Wives at Home.
	Church of England.	Roman Catholic.	Presbyterian.	Wesleyan and other Methodists.	Baptists.	Congregationalists.	Lutherans.	Salvation Army.	Other Christian Sects.	Jews.	Other Religions.	
Church of England	55,391	5,832	1,501	1,159	204	202	31	131	73	34	92	64,650
Roman Catholic	3,028	26,253	361	196	17	37	35	13	75	9	27	30,051
Presbyterian	1,978	853	11,247	296	62	60	8	24	28	1	24	14,581
Wesleyan and other Methodists	954	304	277	13,263	88	44	9	78	21	...	26	15,064
Baptists	230	57	58	93	1,481	34	...	11	16	1	3	1,984
Congregationalists	277	89	57	79	43	2,957	2	6	8	...	6	3,524
Lutherans	453	278	103	76	12	26	666	6	15	...	9	1,644
Salvation Army	95	25	14	87	3	12	2	1,154	3	...	6	1,401
Other Christian Sects	290	148	56	82	14	25	8	11	1,320	1	26	1,981
Jews	111	28	11	8	...	...	1	1	5	675	2	842
Other religions	1,617	770	299	412	106	113	15	47	87	11	2,457	5,934
Wives with husbands at home	64,424	34,637	13,984	15,751	2,030	3,510	777	1,482	1,651	732	2,678	141,656

Birthplaces of Husbands.	Birthplaces of Wives.																Husbands with Wives at Home.
	Australasia.							United Kingdom.									
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.	England and Wales.	Scotland.	Ireland.	Other British Possessions.	Germany.	United States.	Other Foreign Countries.	Born at Sea and Unspecified.	
Australasia—																	
New South Wales	41,488	1,700	511	232	38	320	211	3,733	652	2,156	77	143	79	77	165	51,612
Victoria	2,335	1,623	43	205	5	81	66	417	88	194	18	10	11	11	27	5,134
Queensland	354	40	60	6	..	4	5	69	9	28	1	4	2	2	..	584
South Australia	326	187	8	889	4	21	11	229	32	86	4	19	6	2	4	1,828
Western Australia	41	9	1	9	4	..	..	14	..	5	..	..	1	1	..	85
Tasmania	562	157	14	33	1	198	18	175	31	72	4	7	2	2	3	1,279
New Zealand	370	54	7	11	1	14	80	123	16	40	6	3	1	2	5	733
United Kingdom—																	
England and Wales	13,713	1,602	280	692	28	458	313	22,005	1,365	3,306	177	172	93	166	160	44,530
Scotland	2,792	358	72	106	5	81	58	1,389	4,135	824	50	38	20	26	35	9,989
Ireland	4,655	460	75	130	15	83	50	1,217	399	9,466	39	34	30	29	46	16,728
Other British Possessions	393	57	10	15	1	19	12	242	54	116	57	2	8	15	5	1,006
Germany	922	127	19	101	..	30	18	420	80	335	12	1,085	6	47	14	3,216
United States	303	47	6	12	1	9	5	131	31	87	8	5	59	6	3	713
Other Foreign Countries	1,406	186	45	56	2	48	26	659	131	484	15	86	10	643	13	3,810
Born at Sea and Unspecified	200	27	4	7	..	9	..	75	15	40	..	5	4	3	14	409
Wives with Husbands at Home	69,860	6,634	1,155	2,504	105	1,375	873	30,898	7,068	17,239	468	1,613	332	1,032	494	141,656

Religious professions of married people.

No very remarkable discrepancies are disclosed by the tables just given, indeed as regards both religion and birthplace the married couples on the whole seem fairly matched. Out of 64,650 husbands and 64,424 wives belonging to the Church of England there were 55,391 couples who both belonged to that denomination; and out of 30,051 husbands and 34,637 wives attached to the Church of Rome there were 26,253 cases in which both parties belonged to that church. There were therefore only 9,259 male members of the Church of England, and 9,033 females who had married out of their own communion; while among the Roman Catholics only 3,798 males and 8,384 females had contracted mixed marriages. Similar consistency will be noticed with regard to all the principal denominations. Among the Presbyterians there were 11,247 couples who both belonged to that church, while 3,334 males and 2,737 females had married persons of other religious bodies. Only 1,801 males and 2,488 females belonging to Methodists had married persons of other denominations, although there were 13,263 couples of which both parties were Methodists.

Birthplaces of married people.

With regard to birthplaces, no less than 41,488 of the 51,612 husbands born in New South Wales had wives who were also native born; 3,733 had married women from England and Wales; 2,156 had Irish wives, and 1,700 had chosen for themselves partners from Victoria. Of the wives born in this Colony, who numbered 69,866, in addition to the 41,488 who were married to their countrymen, 13,713 had husbands from England and Wales; 4,655 had chosen Irishmen; 2,792 had Scottish partners; and 2,335 were married to natives of Victoria. There were in this Colony 5,134 husbands and 6,634 wives born in Victoria, but there were only 1,623 couples who both hailed from Victoria. It will be noticed that the number of wives from each of the other Australasian Colonies is greater than the number of husbands. This is notably the case as regards Queensland, as the Census showed that we had 1,155 wives in New South Wales who were born in the northern colony, while the number of husbands who came thence was only 584. At the same time there were only 60 couples in New South Wales both of whom were born in Queensland.

AGES OF THE PEOPLE.

Numbers at each age period.

The Census of 1891 has furnished full particulars with regard to the ages of the people of New South Wales at that date. The following table shows the number of persons, male and female, at each quinquennial period of age :—

Ages.	Total Population.		
	Males.	Females.	Total.
Under 5 years	84,014	81,736	165,750
5 years and under 10	72,895	71,359	144,254
10 ,, ,, 15	62,230	61,186	123,416
15 ,, ,, 20	54,267	54,476	108,743
20 ,, ,, 25	57,963	53,441	111,404
25 ,, ,, 30	59,895	46,950	106,845
30 ,, ,, 35	52,115	36,690	88,805
35 ,, ,, 40	40,380	27,303	67,683
40 ,, ,, 45	31,446	22,237	53,683
45 ,, ,, 50	27,054	18,658	45,712
50 ,, ,, 55	22,753	14,853	37,606
55 ,, ,, 60	16,716	10,812	27,528
60 ,, ,, 65	12,690	7,762	20,452
65 ,, ,, 70	7,030	4,905	11,935
70 ,, ,, 75	5,048	3,692	8,740
75 ,, ,, 80	2,842	1,903	4,745
80 ,, ,, 85	1,294	877	2,171
85 ,, ,, 90	422	284	706
90 ,, ,, 95	142	79	221
95 ,, ,, 100	21	27	48
100 ,, and over	12	7	19
Unspecified	1,333	435	1,768
All ages	612,562	519,672	1,132,234

Regular graduation of numbers.

It will be noticed that there is a gradual diminution in the number of persons at the different periods of age from infancy to old age, the only exception being in regard to the number of those between 20 and 25 years of age. The females show a steady falling off at each age period from the top to the bottom of the column, but the males show an increase in the two periods, from 20 to 25, and from 25 to 30—the ages when the physical energies of men should be at the highest point. Altogether the table shows the composition of the people of this Colony to approach very nearly that of a theoretically perfect community. A comparison of the results of the census of 1891 with those of 1871 and 1881 will be found herewith :—

Ages.	Total Population.			Increase from 1881 to 1891.	
	1871.	1881.	1891.	Numerical	Centesimal.
Under 5 years	81,984	111,123	165,750	54,627	49·16
5 years and under 10 ...	70,527	99,018	144,254	45,236	45·68
10 ,, ,, 15 ...	57,672	88,479	123,416	34,937	39·49
15 ,, ,, 20 ...	42,636	75,734	108,743	33,009	43·58
20 ,, ,, 21 ...	8,414	14,966	22,081	7,115	47·54
21 ,, ,, 25 ...	33,860	59,571	89,323	29,752	49·94
25 ,, ,, 30 ...	43,617	60,538	106,845	46,307	76·49
30 ,, ,, 35 ...	37,989	50,639	88,805	38,166	75·37
35 ,, ,, 40 ...	32,967	46,405	67,683	21,278	45·85
40 ,, ,, 45 ...	25,899	39,535	53,683	14,148	35·79
45 ,, ,, 50 ...	18,162	31,322	45,712	14,390	45·94
50 ,, ,, 55 ...	17,817	24,484	37,606	13,122	53·59
55 ,, ,, 60 ...	11,351	15,009	27,528	12,519	83·41
60 ,, ,, 65 ...	9,302	13,878	20,452	6,574	47·37
65 ,, ,, 70 ..	4,850	8,282	11,935	3,653	44·11
70 ,, ,, 75 ...	3,609	5,518	8,740	3,222	58·39
75 ,, ,, 80 ...	1,275	2,637	4,745	2,108	79·94
80 ,, ,, 100 ..	959	1,888	3,146	1,258	66·63
100 ,, and over	18	26	19	—7	—26·92
Unspecified	1,073	2,416	1,768	—648	—26·82
All ages	503,981	751,468	1,132,234	380,766	50·67

— Signifies a decrease.

Self-supporting males.

Assuming that males of from 20 to 60 years of age are capable of supporting themselves, it will be found that New South Wales possessed no less than 308,322 males of that desirable class, or slightly over 50 per cent. of the total number of males. There were but 30,834 males 60 years of age and over, representing only

5 per cent. of the total male population, while the remaining 273,406 males, or a little under 45 per cent. of the total number, were under 20 years of age. The number of males of from 20 to 40 years—the military age, that is, those upon whom the first call for the defence of the country would naturally be made—was 210,353, or excluding aborigines, 209,589, equal to over 34 per cent. of the total number of males.

Males of military age.

Females of reproductive ages.

From 15 to 45 years of age is usually considered the reproductive period of life in females. There were at the Census date 218,860 such females in New South Wales, or over 42 per cent. of the total number of females.

DIVORCES.

Marriages dissolved.

The Matrimonial Causes Act was assented to on the 3rd of March, 1873. From 1875 to the end of 1891, 409 marriages had been dissolved, the largest number in any year being fifty, during 1891. The subjoined table shows the number of decrees for dissolution of marriage granted during the period 1875–91 :—

Year.	Decrees for dissolution of marriage.	Year.	Decrees for dissolution of marriage.
1875	9	1885	23
1876	19	1886	32
1877	19	1887	25
1878	11	1888	28
1879	10	1889	44
1880	22	1890	42
1881	15	1891	50
1882	19		
1883	14	Total.........	409
1884	27		

Marriages of divorced persons.

The number of persons divorced in the Colony who married again cannot be ascertained; but during the seventeen years which ended with 1890, 95 men and 94 women, who had been divorced in New South Wales or elsewhere, were remarried. The largest number in any year was in 1891, when thirty divorced persons (fifteen males and fifteen females) married again.

Year.	No. of divorced persons remarried.		Year.	No. of divorced persons remarried.	
	Males.	Females.		Males.	Females.
1875	1	....	1885	9	6
1876	2	1	1886	8	8
1877	1	3	1887	4	11
1878	2	3	1888	8	7
1879	4	2	1889	11	6
1880	....	1	1890	10	13
1881	1	5	1891	15	15
1882	2	2			
1883	11	5	Total......	95	94
1884	6	6			

BIRTH-RATE PER MARRIAGE.

Number of children born to a marriage.

The average number of children born to a marriage in each colony, during the decennial period, 1882-1891, is shown below:—

Colony.	Average number of children per marriage.
New South Wales	5·80
Victoria	5·48
South Australia	4·81
Western Australia	6·61
Queensland	6·58
Tasmania	5·11
New Zealand	5·56
Australasia	5·61

Children per marriage in United Kingdom.

Taking the whole of the Australasian Colonies together, the number of children to each marriage is 5·61. This is higher than in the United Kingdom, as might be expected from the number of married women of child-bearing age who have come to these colonies from other countries. Thus the birth-rate is increased, while the marriage rate has not been affected. The average number of children to a marriage in the United Kingdom is :—

England and Wales	4·30
Ireland	5·38
Scotland	4·56

The figures for Ireland are exceptionally high, which is somewhat surprising, as the average age of persons marrying there is much higher than in Australia. The lowest number of children born to a marriage in any of the important European countries is in France, where the average is only 3·04.

BIRTHS.

Mean annual birth-rate.

The mean annual birth-rate of this colony is higher than that of any of the other Australasian colonies with the exception of Queensland, as will be seen from the following decennial table, which shows the birth-rate of each Colony per 1,000 of the population :—

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1882	37·20	30·06	35·95	37·49	35·68	33·78	37·43
1883	37·32	30·26	37·11	37·53	33·57	34·80	36·46
1884	38·44	30·93	36·02	38·62	33·38	36·51	36·18
1885	37·79	31·33	37·08	38·71	34·53	36·19	34·70
1886	37·43	31·30	38·16	35·95	38·15	35·51	33·15
1887	37·06	32·50	38·94	34·38	36·64	35·46	32·14
1888	37·20	32·70	39·12	33·55	34·47	34·91	31·33
1889	34·97	33·35	38·13	32·80	34·95	34·03	30·23
1890	35·36	33·60	39·66	32·54	33·09	33·64	29·42
1891	34·50	33·57	36·64	33·92	34·61	33·37	29·01
Mean for 10 years	36·73	31·96	37·68	35·55	34·91	34·82	33·01

Birth-rates of European countries.

For further comparison the mean annual birth-rates per thousand for twenty years (1871 to 1890) are given for several European countries, from which the high rate of New South

Wales is still more apparent. The information in this table is taken from the report of the Registrar-General of England:—

United Kingdom	32·6
England and Wales	34·0
Scotland	33·6
Ireland	24·9
France	24·6
Switzerland	29·4
Italy	37·3
Germany	38·1
Prussia	38·2
Austria	38·6
Hungary	44·0
Holland	35·2
Belgium	31·0
Denmark	31·7
Norway	30·7
Sweden	29·9

Increase of births.

The births in New South Wales have increased year by year since 1865, and now exceed those of any other colony. The superiority in regard to the number of births rested with Victoria until the year 1879, when the births in this Colony exceeded those of its southern neighbour by 94. During each of the last twelve years the excess has been maintained, the greatest being in 1886, when the births registered in New South Wales were more numerous than those registered in Victoria by 5,460. Last year the difference was 953 in favour of this Colony.

Number of births in each colony of Australasia.

The number of births registered in each of the colonies for the period 1876–91 is shown in the following table:—

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.
1876	23,298	26,769	6,903	8,224	918	3,149	16,168
1877	23,851	26,010	7,169	8,640	912	3,211	16,856
1878	25,328	26,581	7,397	9,282	871	3,502	17,770
1879	26,933	26,839	7,870	9,902	977	3,564	18,070
1880	28,162	26,148	8,196	10,262	933	3,739	19,341
1881	28,993	27,145	8,220	10,708	1,005	3,918	18,732
1882	29,702	26,747	8,518	10,844	1,089	4,043	19,009
1883	31,281	27,541	9,890	11,173	1,058	4,259	19,202
1884	33,946	28,850	10,679	11,847	1,094	4,578	19,846
1885	35,043	29,975	11,672	12,046	1,200	4,637	19,693
1886	36,284	30,824	12,582	11,177	1,466	4,627	19,299
1887	37,236	33,043	13,513	10,831	1,557	4,736	19,135
1888	38,525	34,503	14,247	10,510	1,518	4,777	18,902
1889	37,295	36,359	14,401	10,318	1,594	4,757	18,457
1890	38,960	37,578	15,407	10,364	1,561	4,813	18,278
1891	39,458	38,505	14,715	10,737	1,786	4,971	18,273

Sex of children born.

In no year, as far as observation extends, has the number of females born exceeded the males. The numbers of each sex born in New South Wales since 1872 are given below :—

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1872	10,276	9,974	20,250	1882	15,087	14,615	29,702
1873	10,952	10,492	21,444	1883	16,014	15,267	31,281
1874	11,323	10,855	22,178	1884	17,417	16,529	33,946
1875	11,380	11,148	22,528	1885	17,939	17,104	35,043
1876	11,791	11,507	23,298	1886	18,700	17,584	36,284
1877	12,292	11,559	23,851	1887	18,901	18,335	37,236
1878	13,082	12,246	25,328	1888	19,616	18,909	38,525
1879	13,840	13,093	26,933	1889	19,335	17,960	37,295
1880	14,424	13,738	28,162	1890	19,887	19,073	38,960
1881	14,891	14,102	28,993	1891	20,386	19,072	39,458

Births of males exceed females.

The excess of males born over females during the past twenty years has varied from 2·08 per cent. in 1875 to 7·65 in 1889, the average being 4·81 per cent. The following table shows the proportion of males born to every 100 females :—

Year.	Males born to every 100 females.	Year.	Males born to every 100 females.
1872	103·03	1882	103·23
1873	104·38	1883	104·89
1874	104·31	1884	105·37
1875	102·08	1885	104·88
1876	102·47	1886	106·35
1877	106·34	1887	103·09
1878	106·83	1888	103·74
1879	105·71	1889	107·65
1880	105·00	1890	104·27
1881	105·59	1891	106·89

Births most numerous in spring.

Births are more numerous in spring than in any other portion of the year, and are fewest in the March quarter. This is found to be the case in the other colonies of Australasia as well as in New South Wales. The following table gives the number of births in each quarter of the year since 1877 :—

Year.	31 March.	30 June.	30 September.	31 December.
1877	5,620	5,837	6,421	5,973
1878	5,962	6,165	6,976	6,225
1879	6,231	6,591	7,264	6,847
1880	6,590	7,116	7,230	7,226
1881	6,976	6,983	7,514	7,520
1882	7,195	7,273	7,827	7,407
1883	7,378	7,755	8,000	8,148
1884	8,141	8,443	9,160	8,202
1885	8,178	8,508	9,656	8,701
1886	8,451	8,976	9,592	9,265
1887	9,075	9,183	9,890	9,088
1888	9,058	9,651	10,162	9,654
1889	9,125	9,292	9,635	9,243
1890	9,154	9,667	10,497	9,642
1891	9,161	9,662	10,345	10,290

Birth-rate per thousand.

Separating the Colony into the divisions of city of Sydney, suburbs, and country districts, it will be seen from the following table that the birth-rate per thousand is much higher in the suburbs than in the other divisions. The highest rate reached for the whole Colony was 39·63, in 1871, which was also the year of the greatest birth-rate in the city. The estimated maximum rate for the suburbs was reached in 1886, when the births were 54·30 per thousand of the population. In the country districts the greatest number of births in proportion to the population occurred in 1874, when the rate was 39·72 per thousand.

Annual birth-rate.

Year.	Births per thousand of the population.				
	Metropolis.			Country Districts.	New South Wales.
	City of Sydney.	Suburbs.	Total.		
1872	36·63	37·69	37·12	38·96	38·46
1873	38·09	40·55	39·22	39·44	39·38
1874	37·81	38·57	38·16	39·72	39·29
1875	37·44	37·92	37·67	38·86	38·53
1876	38·37	37·73	38·06	38·74	38·55
1877	38·13	37·18	37·67	38·02	37·92
1878	37·62	38·67	38·15	38·65	38·50
1879	38·48	39·84	39·18	38·92	38·99
1880	37·17	40·61	39·00	38·73	38·81
1881	35·84	42·06	39·21	37·34	37·90
1882	34·65	44·84	40·23	35·90	37·20
1883	33·24	46·95	40·81	35·82	37·32
1884	34·80	52·68	44·70	35·75	38·44
1885	31·81	53·16	45·46	35·18	37·79
1886	31·01	54·30	44·53	34·32	37·43
1887	30·76	51·33	43·21	34·31	37·06
1888	31·46	47·95	41·92	35·02	37·20
1889	30·47	42·94	38·73	33·18	34·97
1890	30·98	40·07	37·23	34·44	35·36
1891	31·97	37·53	35·95	33·76	34·50
Mean ...	34·84	43·13	39·81	36·75	37·68

Excess of births over deaths.

The excess of births over deaths has not shown a steady increase year by year, but has fluctuated somewhat, as will be seen from the succeeding table. In the whole Colony, during the twenty years from 1872 to 1891, the least excess was 11,757 in 1875, the highest being 24,742 in the year 1890. In the city of Sydney the least excess was in 1875, viz., 489; the highest in 1887, when the number reached 1,835. The suburbs show a more progressive uniformity than the city. The least excess of births over deaths also occurred in 1875, when it was 1,261; the greatest excess was 6,323, being, as in the case of the city, in the year 1890. In the country districts the number ranged from 9,913, in 1876, to

16,804, in 1890. The excess of births over deaths in New South Wales for the last twenty years was :—

Year.	Metropolis.			Country Districts.	New South Wales.	Per cent. of population at end of previous year.
	City of Sydney.	Suburbs.	Total.			
1872	1,069	1,521	2,590	10,192	12,782	2·47
1873	1,265	1,766	3,031	10,802	13,833	2·50
1874	1,044	1,588	2,632	10,894	13,526	2·44
1875	489	1,261	1,750	10,007	11,757	2·04
1876	819	1,373	2,192	9,913	12,105	2·04
1877	1,399	1,925	3,324	10,658	13,982	2·28
1878	1,163	2,023	3,186	11,379	14,565	2·26
1879	1,448	2,499	3,947	12,786	16,733	2·49
1880	995	2,439	3,434	13,497	16,931	2·39
1881	1,495	3,065	4,560	12,897	17,457	2·33
1882	1,229	3,379	4,608	12,278	16,886	2·16
1883	1,523	3,819	5,342	13,690	19,032	2·33
1884	1,594	4,352	5,946	13,780	19,726	2·29
1885	1,250	4,523	5,773	13,988	19,761	2·18
1886	1,610	5,250	6,860	14,837	21,697	2·28
1887	1,835	6,039	7,874	15,914	23,788	2·40
1888	1,599	5,850	7,449	16,668	24,117	2·36
1889	1,431	5,575	7,006	15,493	22,499	2·14
1890	1,615	6,323	7,938	16,804	24,742	2·29
1891	1,343	6,245	7,588	15,584	23,172	2·07

Net annual increase.

The mean annual increase to the population by reason of the excess of births over deaths amounts to 2·29 per cent. for a period extending over twenty years—that is, going back to the year 1872.

Excess in favour of females.

Notwithstanding that the number of males born is considerably larger than that of females, the actual increase of population from the excess of births over deaths is, owing to the greater mortality amongst male children, greatly in favour of the females. During the ten years which closed with 1891, the number of females added to the community by excess of births exceeded the males by 15,218, or 15·20 per cent.

ILLEGITIMACY.

Illegitimacy increasing.

The number of illegitimate births in the city, suburbs, and country districts will be found in the following table. Taking

the whole period over which the tables
the percentage has increased throughout
city and suburbs of Sydney, the incre
being very slight, as shown in the tab
780. As regards the city proper, the i
been most marked, as the following fig

Year.	Metropolis.		
	City of Sydney.	Suburbs.	Total.
1872	182	66	248
1873	199	86	285
1874	241	88	329
1875	260	85	345
1876	306	88	394
1877	305	77	382
1878	317	108	425
1879	389	117	506
1880	411	150	561
1881	425	167	592
1882	440	161	601
1883	439	237	676
1884	527	259	786
1885	529	316	845

Illegitimate births.

The bare statement of these figures is a serious reflection upon the morals of the community. That during the past five years nearly one child in every six should have been born with the brand of illegitimacy is a startling revelation with regard to social morality. It is also a matter of State concern, as a very large percentage of these unfortunate children become a burden to the country from their birth, and it is from such that the pauper population of the Colony is largely recruited. Happily, as regards the city, the case is not so bad as it appears from the table. Not a few of the women whose children are born out of wedlock in the city really belong to the suburbs or country districts, but to what extent does not appear; possibly the smaller proportion of illegitimate births noticeable in the country districts is due to the fact that women who have fallen come to Sydney to hide their shame. The table herewith, showing the number of accouchements at the Benevolent Asylum, certainly gives colour to this supposition, for out of the large number of unmarried women whose confinements took place in that institution it is only reasonable to suppose that the suburbs and country contributed a large quota :—

Cause of excess of illegitimacy in the city.

Year.	No. of Confinements.	Married.	Unmarried	Year.	No. of Confinements.	Married.	Unmarried
1865	129	50	79	1879	203	45	158
1866	129	51	78	1880	233	51	182
1867	121	44	77	1881	225	50	175
1868	102	46	56	1882	237	45	192
1869	112	40	72	1883	210	33	177
1870	95	29	66	1884	305	84	221
1871	117	54	63	1885	262	55	207
1872	102	37	65	1886	300	71	229
1873	107	27	80	1887	257	76	181
1874	126	36	90	1888	281	70	211
1875	113	30	83	1889	252	48	204
1876	156	38	118	1890	266	35	231
1877	169	41	128	1891	324	61	263
1878	160	38	122				

Illegitimacy in the city and suburbs.

Taking the city and suburbs of Sydney together, the rates of illegitimacy during the five-year periods since 1871, are :—

Quinquennial Period.	Per cent. of total births.	Per cent. of legitimate births.
1872–76	5·43	5·75
1877–81	6·36	6·78
1882–86	6·67	7·14
1887–91	7·64	8·27

The rates are much more favourable than those of the city taken separately, and perhaps represent the true state of affairs as regards illegitimacy more accurately than the table already given.

For the country districts the rates are much lower :—

Quinquennial Period.	Per cent. of total births.	Per cent. of legitimate births.
1872–76	3·66	3·80
1877–81	3·44	3·57
1882–86	3·26	3·37
1887–91	3·67	3·81

Dividing the illegitimate births of the whole Colony into the same periods as given for the city, their proportions, as compared with the total births, and with legitimate births, are :—

Quinquennial Period.	Per cent. of total births.	Per cent. of legitimate births.
1872–76	4·14	4·31
1877–81	4·30	4·49
1882–86	4·44	4·64
1887–91	5·13	5·41

Colony compares favourably with other countries.

Taken as a whole, the Colony compares favourably with most other countries, though its rate as computed for the ten years

1882–91 is higher than that of any other of the Colonies, with the exception of Victoria, as shown in the following table:—

Country.	Illegitimate births per cent.	Country.	Illegitimate births per cent.
New South Wales	4·81	Tasmania	4·03
Victoria	4·82	New Zealand	3·13
Queensland	4·33	England and Wales..	4·72
South Australia	2·40	Ireland	2·50
Western Australia	4·17	Scotland	8·24

Of the total number of children born in Australasia during the last ten years 4·05 per cent. were illegitimate.

Illegitimacy in Foreign States.

The following figures, taken from Mulhall's Dictionary of Statistics, show the percentage of illegitimate births in various countries:—

Country.	Illegitimate births per cent.	Country.	Illegitimate births per cent.
Denmark	11·1	Spain	5·5
Sweden	10·2	Portugal	5·6
Norway	8·5	Canada	5·0
Germany	8·7	Switzerland	4·8
France	7·4	Holland	3·5
Belgium	7·1	Russia	3·1
United States	7·0	Greece	1·6
Italy	6·5		

The rate of illegitimate births in Austria was 13·5 per cent., a ratio much larger than that of any country included in the above table, the excessive number of children born out of wedlock being occasioned by the extraordinary laws formerly enforced by the government of the Austrian Empire, regulating the age before which a man was incapable of contracting a legal marriage.

The rates for most of these colonies
England and Scotland, but illegitimac
it is decreasing in the United Kingdom

Percentage of illegitimacy to total births.

Year.	Illegitimate Bi		
	Metropolis.		
	City of Sydney.	Suburbs.	Total.
1872	6·32	2·70	4·66
1873	6·49	3·11	4·89
1874	7·72	3·15	5·56
1875	8·22	2·92	5·68
1876	9·24	2·87	6·19
1877	8·97	2·37	5·75
1878	9·09	2·93	5·94
1879	10·47	2·82	6·44
1880	11·00	3·25	6·71
1881	11·36	3·23	6·64
1882	11·72	2·74	6·24
1883	11·68	3·62	6·59
1884	12·76	3·34	6·62
1885	13·61	3·77	6·89
1886	13·90	4·00	6·89
1887	13·13	3·91	6·50
1888	15·07	4·85	7·65
1889	17·41	4·57	7·99

The following table shows the number of twins and triplets born in New South Wales during the last ten years :—

Year.	Triplets.				Twins.			
	No. of cases.	M.	F.	Total.	No. of cases.	M.	F.	Total living at Birth.
1882	......	......	......	......	213	217	208	425
1883	2	3	3	6	287	277	297	574
1884	4	6	6	12	288	277	295	572
1885	2	5	1	6	306	305	307	612
1886	1	......	3	3	330	284	373	657
1887	1	3	......	3	310	294	325	619
1888	1	1	2	3	363	371	355	726
1889	1	2	1	3	329	358	298	656
1890	1	3	......	3	398	405	391	796
1891	......	......	......	......	393	388	397	785
	13	23	16	39	3,217	3,176	3,246	6,422

As stated in the foregoing table there were 3,217 cases of twins and 13 cases of triplets during the ten years 1882–91. The total number of confinements recorded in this period was 354,499. It follows, therefore, that one mother in every 110 gave birth to twins, and one mother in every 27,269 was delivered of three children at a birth.

DEATHS.

Mean death-rate.

The number of deaths occurring in the Colony during the last twenty years averaged annually 16·35 per thousand for males, and 13·86 for females, or 15·08 for the whole population. Compared with the death-rates of other countries, especially those of the Old World, this rate is remarkably low. Yet, as will presently appear, it is higher than might be anticipated from the peculiarly healthy climatic conditions which pertain to New South Wales.

The mean decennial death-rate of the Australasian Colonies from 1882 to 1891 varies from 10·37 per thousand, in New

Zealand, to 17·04, in Queensland, and
the New South Wales rate is the neare
are over the mean rate:—Queenslar
Australia, 16·59; Tasmania, 15·61; V
are lower,—New South Wales, 14·66
and New Zealand, 10·37 per thousand

Year.	New South Wales.	Victoria.	Queensland.	Sout Austr
1882	16·05	15·32	18·04	15·
1883	14·61	14·29	18·91	15·
1884	16·10	14·48	23·14	15·7
1885	16·48	15·01	19·81	12·
1886	15·05	15·18	16·91	13·
1887	13·38	15·74	14·89	13·
1888	13·91	15·44	15·18	12·
1889	13·87	17·79	16·24	11·
1890	12·90	16·10	14·51	12·
1891	14·24	16·24	12·78	13·
Mean.. ...	14·66	15·56	17·04	13·

Death-rate of males and females compared.

The death-rate of males averages in this Colony 16·35 per thousand, or more than one-sixth higher than that of females. The number of deaths of both sexes from 1872 to 1891 will be seen below :—

Year.	Males.	Females.	Total.	Death Rate per 1,000 of mean population.		
				Males.	Females.	Total.
1872	4,442	3,026	7,468	15·45	12·66	14·18
1873	4,599	3,012	7,611	15·50	12·15	13·98
1874	5,022	3,630	8,652	16·35	14·11	15·33
1875	6,245	4,526	10,771	19·64	16·97	18·42
1876	6,508	4,685	11,193	19·82	16·98	18·52
1877	5,877	3,992	9,869	17·19	13·91	15·69
1878	6,284	4,479	10,763	17·55	14·94	16·36
1879	6,082	4,118	10,200	16·16	13·10	14·77
1880	6,638	4,593	11,231	16·76	13·94	15·48
1881	6,753	4,783	11,536	16·12	13·82	15·08
1882	7,596	5,220	12,816	17·34	14·48	16·05
1883	7,116	5,133	12,249	15·45	13·54	14·61
1884	8,325	5,895	14,220	17·12	14·85	16·10
1885	8,900	6,382	15,282	17·43	15·32	16·48
1886	8,501	6,086	14,587	15·95	13·95	15·05
1887	7,776	5,672	13,448	14·12	12·49	13·38
1888	8,453	5,955	14,408	14·94	12·67	13·91
1889	8,674	6,122	14,796	14·93	12·61	13·87
1890	8,282	5,936	14,218	13·82	11·81	12·90
1891	9,558	6,728	16,286	15·41	12·86	14·24
Mean for 20 years				16·35	13·86	15·08

Greater mortality amongst males.

The principal cause of the greater mortality amongst males is found in the nature of their occupations, with the accidents and exposure attendant thereon. This is especially marked in the country districts of the Colony, where deaths from accident are extremely numerous, especially among males. Besides this, the greater delicateness of male infants operates to increase the death-rate as compared with that of females. It has been shown elsewhere that the natural increment to the population by births is in the proportion of 106·89 males to 100 females ; but, from the causes alluded to, the net increase of population by excess of births over deaths is largely in favour of females. For the five years, 1882–91, the excess of births over deaths averaged annually for males 25·92 per cent., and for females 41·39 per cent.

Comparison of male with female deaths.

Male births in excess.

The excess of males in the commu larger number of male deaths, makes th favourable to female lives than is actuall table has been computed on the assum females in the community are equal would be if it were not for the excess o population by immigration. It would table, that the extra proportion of ma balance the extra number of male death

Year.	Male deaths.	Female deaths.	Co male if m fema lati e
1882	7,596	5,220	6
1883	7,116	5,133	5
1884	8,325	5,895	6
1885	8,900	6,382	7,
1886	8,501	6,086	6

since 1871. Taking the last ten years the deaths during each quarter of the year were :—

Year.	31 March.	30 June.	30 September.	31 December.
1882	3,485	3,290	2,911	3,130
1883	3,125	3,081	2,790	3,253
1884	3,699	3,602	3,126	3,793
1885	3,924	3,750	3,586	4,022
1886	3,718	3,720	3,320	3,829
1887	3,980	3,362	2,805	3,301
1888	3,624	3,595	3,387	3,802
1889	4,101	3,728	3,158	3,809
1890	3,652	3,448	3,516	3,602
1891	3,758	3,535	3,601	5,392

Favourable death-rate of Colony.

It has been already pointed out that in regard to its death-rate the Colony compares very favourably with the older countries of the world. Taken over a decennial period (1881–90), the average deaths per thousand of mean population in the United Kingdom and several of the leading European countries, are :—

United Kingdom	18·98	Austria	29·51
England and Wales	19·14	†Hungary	33·31
Scotland	19·18	Holland	20·97
Ireland	17·94	Belgium	20·31
France	22·01	Denmark	18·61
*Spain	31·04	Norway	16·94
Switzerland	20·82	Sweden	17·05
Italy	27·28		
Germany	25·10	Average	22·52
Prussia	24·69		

* For the period 1878–1884. † For the period 1879–1888.

Contrast this with the mean decennial rates (1881–90) in the Colonies :—

New South Wales	14·66	Tasmania	15·61
Victoria	15·56	New Zealand	10·37
Queensland	17·04		
South Australia	13·62	Average, Australasia	14·78
Western Australia	16·59		

Death-rate lower in Australia than Europe.

There are many causes operating to increase the European rate, which have not yet affected the colonies. Chief amongst these are the scourges of small-pox and cholera. It is not, therefore, surprising that even the healthiest country of Europe should have a higher annual death-rate than any part of Australasia. Considering the favourable environments of the population in

New South Wales, the matter for
difference is so great but that it is
climatic conditions, which are most
condition of the great body of the
their occupations more healthful than
for the pitiable loss of infant life, t
would not reach much more than half

Mortality in the Colony and its subdivisions.

For the purpose of comparison, th
suburbs, and country districts suggest
death-rate per thousand of each subdi
years 1872–91 is given in the subjoine

Year.	Metropolis.		
	City of Sydney.	Suburbs.	Tot
1872	23·03	14·15	19
1873	22·37	14·63	18
1874	25·16	16·59	21
1875	31·65	21·47	26
1876	28·87	20·79	24
1877	22·43	15·13	18

rate in the twenty years, and 16·05 the highest, 4·67 being the range:—

Districts.	Per 1,000 of mean population.		
	Maximum.	Minimum.	Mean.
City of Sydney	31·65	15·82	22·17
Suburbs	23·67	14·15	17·66
Metropolis (Sydney and Suburbs)	26·81	15·10	20·14
Country Districts	16·05	11·48	13·18
New South Wales	18·52	12·90	15·22

Death-rate of persons over 5 years.

Taking the deaths of persons over 5 years of age, the rates for the metropolitan district and the country are not only more favourable but more equal:—

Districts.	Per 1,000 of mean population.		
	Maximum.	Minimum.	Mean.
City of Sydney	19·70	10·90	14·78
Suburbs	12·86	7·64	9·86
Metropolis (Sydney and Suburbs)	15·55	9·79	11·99
Country Districts	11·71	8·27	9·37
New South Wales	12·78	8·97	10·24

Infant mortality cause of high death-rate in city and suburbs.

The city maximum rate was in 1876, and is the disturbing element in the whole series, otherwise the death-rates are particularly favourable for these ages. Turning to deaths under 5 years, which may be generally termed the ages of infantile life, the chief factor of the excessive death-rate of the city and suburbs will be found:—

Districts.	Per 1,000 of mean population.		
	Maximum.	Minimum.	Mean.
City of Sydney	105·64	48·08	70·08
Suburbs	86·99	45·00	66·26
Metropolis (Sydney and Suburbs)	93·32	45·85	67·89
Country Districts	40·37	25·84	34·05
New South Wales	53·64	32·97	39·10

The lesson conveyed by the above table is a very striking one. The minimum death-rate of infants in the Metropolis exceeded the maximum rate of the country by 13 per cent., and the mean rate of the country was only half the metropolitan.

Natural salubrity of the Colony.

When the circumstances of life in the country districts are considered, the distance sick persons are removed from the comforts, and even the necessaries, which sickness demands, the full meaning of the low rate, both for adults and children, will best be understood. No more potent argument could be advanced as to the natural salubrity of the Colony than the statement of the death-rates, as recorded outside the walls of the metropolis.

Death-rate of children lowest in the country.

All satisfaction, however, in regard to the low death-rate is confined to the country districts. As far as Sydney and its suburbs are concerned, there is no cause for congratulation; on the contrary, the rate at which children of tender years drop into the grave forms a pathetic commentary on the civilization of the Colony. Taking the whole period embraced in the table, the death-rates of children under 5 years were 70 per thousand in the city, and 66 per thousand in the suburbs. During the ten years, 1871 to 1880, the suburbs could boast a death-rate of one-third less than the city, but since 1880 the suburban has been the higher of the two. The following quinquennial table has been compiled in order to illustrate the gradual change which has occurred since 1871:—

Comparison of quinquennial periods.

Quinquennial records.	Metropolis.			Country Districts.	New South Wales.
	City of Sydney.	Suburbs.	Total.		
	All ages.				
1871–75	24·69	16·46	20·91	12·77	14·99
1876–80	25·41	17·63	21·46	13·96	16·10
1881–85	21·49	20·21	20·77	13·46	15·70
1886–90	17·36	18·26	17·94	11·82	13·80
	Over 5 years.				
1871–75	15·94	8·87	12·72	9·25	10·21
1876–80	16·82	8·97	12·82	9·86	10·73
1881–85	14·76	10·80	12·56	9·50	11·40
1886–90	11·66	10·51	10·93	8·49	9·27
	Under 5 years.				
1871–75	75·45	56·35	66·28	30·55	39·78
1876–80	80·52	74·43	77·45	35·80	46·36
1881–85	67·77	77·20	73·35	35·99	46·63
1886–90	56·45	80·95	58·12	31·68	40·04

Improvement in city death-rate.

A remarkable improvement may be noticed in the death-rate of the city, both for ages over and under 5 years. In the country, during the second quinquennial period, the rate showed an increase, particularly amongst infant lives; but the third period is marked by a slight recovery, which is quite eclipsed by the striking decline in the death-rates of 1886–90. As regards the suburbs the signs are not so assuring, for although a considerable improvement is manifest in 1886–90, the previous five years are much higher than in the two preceding quinquennial periods; and during the last five years the death-rates of persons under five years were considerably higher than in the city or the country. The following tables show the mortality in the city and suburbs of Sydney and in the country districts during ten years; the figures of previous years will be found in earlier editions of this work. In the first will be found the actual number of deaths, and in the second the proportion of children under five years, and of persons over that age, who died, as compared with the whole population :—

Deaths of persons under and over 5 years.

Year.	Children under 5 years.				Persons over 5 years.			
	City.	Suburbs.	Country.	N.S.W.	City.	Suburbs.	Country.	N.S.W.
1882	990	1,355	3,107	5,452	1,535	1,142	4,687	7,364
1883	940	1,455	2,909	5,304	1,293	1,260	4,392	6,945
1884	1,053	1,838	3,337	6,228	1,482	1,553	4,957	7,992
1885	1,043	2,091	3,478	6,612	1,593	1,766	5,311	8,670
1886	919	2,150	3,225	6,294	1,305	1,895	5,093	8,293
1887	770	1,828	3,022	5,620	1,172	1,776	4,880	7,828
1888	913	2,122	3,172	6,207	1,250	1,973	4,978	8,201
1889	961	2,278	3,284	6,523	1,158	1,941	5,174	8,273
1890	723	1,775	3,278	5,776	1,177	1,916	5,349	8,442
1891	855	1,966	3,689	6,510	1,336	2,263	6,177	9,776

Death-rate of persons under 5 years.

Year.	Children under 5 years.				
	City.	Suburbs.	Metropolis.	Country.	N.S.W.
1882	70·27	74·93	72·89	36·66	46·61
1883	65·32	73·48	70·05	33·12	43·46
1884	71·49	82·22	77·98	36·98	48·92
1885	69·59	81·50	77·11	37·84	49·86
1886	60·91	74·92	70·09	34·03	45·42
1887	50·50	57·05	54·94	30·82	38·66
1888	59·27	60·60	60·19	31·33	40·92
1889	63·42	61·06	61·74	31·56	41·68
1890	48·08	45·00	45·85	30·83	35·92
1891	68·91	45·69	50·89	33·21	39·10
Mean......	70·08	66·26	67·89	34·05	43·57

Year.	Persons over 5 years.				
	City.	Suburbs.	Metropolis.	Country.	N.S.W.
1882	16·93	9·74	12·66	9·97	10·80
1883	13·11	10·16	11·47	8·91	9·70
1884	14·26	11·53	13·06	9·49	10·57
1885	14·86	12·86	13·74	9·65	10·91
1886	12·02	12·80	12·00	8·87	9·98
1887	10·90	10·98	10·95	8·27	9·11
1888	12·00	11·03	11·38	8·28	9·28
1889	11·42	9·81	10·36	8·47	9·09
1890	11·96	8·81	9·79	8·55	8·97
1891	11·99	9·59	10·77	9·61	10·00
Mean........	14·78	9·86	11·99	9·73	10·24

Deaths of children under 1 year.

The following table gives the number of children under 1 year dying in the city, suburbs, and country; and the number per thousand, as compared with the births. This latter approximately represents the proportion of children born who died within a year:—

Deaths of Children under One Year of Age.

Year.	Metropolis.						Country Districts.		New South Wales.	
	City of Sydney.		Suburbs.		Total.					
	Deaths under 1.	Per 1,000 births.	Deaths und er 1.	Per 1,000 births.	Deaths under 1.	Per 1,000 births.	Deaths under 1.	Per 1,000 births.	Deaths under 1.	Per 1,000 births.
1872	507	176·1	339	139·1	846	159·2	1,270	85·0	2,116	104·4
1873	487	158·8	341	123·4	828	142·1	1,157	74·0	1,985	92·5
1874	588	188·4	403	144·6	991	167·7	1,437	88·3	2,428	109·4
1875	613	193·8	461	158·5	1,074	176·9	1,621	98·4	2,695	119·6
1876	561	169·4	521	170·3	1,082	169·9	1,547	91·3	2,629	112·8
1877	562	165·3	476	146·6	1,038	156·2	1,747	101·5	2,785	116·7
1878	650	186·5	591	160·8	1,241	173·4	1,885	103·7	3,126	123·4
1879	612	164·7	594	143·2	1,206	153·4	1,680	88·0	2,886	107·1
1880	785	210·1	821	177·7	1,606	192·2	1,594	80·4	3,200	113·6
1881	608	162·5	836	161·6	1,444	162·0	1,897	94·4	3,341	115·2
1882	737	196·3	1,028	174·9	1,765	183·3	2,132	106·2	3,897	131·2
1883	668	177·8	1,012	154·8	1,680	163·2	1,910	90·9	3,590	114·7
1884	769	186·2	1,272	164·2	2,041	171·9	2,244	101·6	4,285	126·2
1885	780	200·7	1,512	180·4	2,292	186·8	2,304	101·1	4,596	131·1
1886	702	183·1	1,573	169·2	2,275	173·3	2,360	101·9	4,635	127·7
1887	573	151·7	1,317	136·6	1,890	140·8	2,055	86·3	3,945	105·9
1888	640	170·1	1,444	145·2	2,084	152·0	2,187	88·1	4,271	110·9
1889	706	198·9	1,595	162·8	2,301	172·4	2,371	99·0	4,672	125·3
1890	545	155·0	1,278	127·6	1,823	155·4	2,249	88·4	4,071	104·5
1891	664	187·9	1,411	134·7	2,075	148·1	2,616	102·8	4,691	118·9
Mean...............	......	179·2	......	153·8	....	165·0	......	93·6	......	115·6

Infant mortality greater in towns.

The experience of the United Kingdom shows that infant mortality is always higher in large towns than in the country districts. The experience of this Colony is somewhat similar. But, though the conditions of life in England are more favourable in the country districts than in the towns, the same is not necessarily the case here. In sparsely scattered communities, such as the country districts of this Colony mainly comprise, it is frequently impossible to obtain for children of tender years articles which in towns are considered, and rightly so, almost necessaries of life. Were it not, therefore, for the contagions which seem incidental to towns, the death-rate of children might naturally be expected to be, so far as this Colony is concerned, higher in the country than in the city. That such is not the case is evident from the foregoing table. Compared with the other colonies, and England and France, the rates of New South Wales, nevertheless, seem very favourable, as will be seen on reference to the following table, which gives the mean annual rates calculated for a period of ten years :—

The Colonies compared with England and France.

Country.	Deaths of children under 1 year per 1,000 births.
New South Wales	119·64
,, ,, Sydney and suburbs	164·72
,, ,, country districts	96·63
Victoria	127·58
,, Melbourne and suburbs	170·75
,, country districts	100·98
Queensland	128·30
South Australia	116·52
Western Australia	122·12
Tasmania	104·63
New Zealand	87·24
England and Wales	141·60
,, London	151·60
Scotland	117·44
France	166·00

Colony compares favourably with other countries.

The general salubrity of the Colony may be taken as well established, and if the deaths of Sydney and suburbs, especially amongst young children, were not relatively more numerous than for the rest of the Colony, New South Wales need not fear comparison with any country.

The comparatively high death-rates of Sydney certainly do not arise from natural causes. Seated on the hilly shores of Port Jackson, its situation is all that could be desired, and the configuration of the ground on which it stands is especially adapted to the requirements of a perfect drainage system. What Nature with lavish hand had bestowed, was, however, until recently, in danger of being destroyed or polluted; for looking through the causes of death the conclusion is inevitable that no small part of the mortality of Sydney and its suburbs arose primarily, or indirectly, from diseases which sanitary precautions might have averted.

Sydney compares well with other capitals.

With the exception of Hobart and Wellington, there is not much difference in the mean annual death-rates of the capitals of the Australasian Colonies. The rates for a single year, however, do not present such uniformity, as will be seen by the following figures for 1891—Melbourne, 19·1; Hobart, 23·9; Perth, 26·95; Brisbane, 13·9; Adelaide, 17·0; Sydney, 16·5; and Wellington, 14·6. Of course the suburbs of the various cities are included in these calculations. Compared with cities in other parts of the world, the result is generally favourable to Australasia. The following table shows the mean death rate of the chief Australasian, European, and American cities:—

	Annual Death-rate.		Annual Death-rate.
Hobart	23·6	Perth	20·0
Sydney	21·13	Brisbane	17·4
Adelaide	20·71	Wellington	14·4
Melbourne	20·5		

United Kingdom.

	Annual Death-rate.		Annual Death-rate.
Dublin	27·1	Sheffield	21·6
Liverpool	26·7	London	21·1
Cork	26·1	Edinburgh	20·2
Manchester	25·5	Birmingham	19·8
Glasgow	25·3	Portsmouth	19·7
Plymouth	22·3	Bristol	19·6
Newcastle	21·8	Brighton	19·0

Continental Europe.

Madrid	37.4	Berlin	27·6
St. Petersburg	51·4	Paris	28·6
Buda-Pesth	35·2	Amsterdam	23·7
Prague	32·3	Stockholm	24·7
Breslau	32·5	Copenhagen	22·1
Munich	32·8	Venice	22·7
Milan	30·6	Brussels	23·9
Rome	26·8	Rotterdam	23·3
Vienna	29·0	The Hague	22·4
Cologne	26·2	Geneva	21·2
Leipsic	26·1	Christiania	18·8
Hamburg	24·5		

America.

Montreal	37·2	Toronto	21·5
New York	26·2	Baltimore	21·1
Brooklyn	25·6	San Francisco	18·1
Boston	23·5	Philadelphia	20·3
New Orleans	22·7	St. Louis	19·3

This list is fairly representative, and largely as the rate for Sydney is swollen by the deaths of children of tender years, whose lives are often needlessly sacrificed, the comparison is satisfactory.

Deaths in 1891.

The following table shows the numbers of deaths at all ages during the year 1891, distinguishing those which occurred in the city and suburbs of Sydney and in the country districts :—

Table showing the Deaths at all ages in Sydney, Suburbs, and Country Districts.

	Under 1 year.	1 to 2 years.	2 to 3 years.	3 to 4 years.	4 to 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 25 years.	25 to 30 years.	30 to 35 years.	35 to 40 years.	40 to 45 years.	45 to 50 years.	50 to 55 years.	55 to 60 years.	60 to 65 years.	65 to 70 years.	70 to 75 years.	75 to 80 years.	80 to 85 years.	85 to 90 years.	90 to 95 years.	95 to 100 years.	100 years and upwards.	Age not specified.	Total.
Males—																											
Sydney	356	58	14	23	9	26	22	29	59	76	91	70	61	67	69	69	67	40	44	21	12	5	2	...	...	2	1,292
Suburbs.........	761	167	59	36	37	62	21	50	57	82	94	104	97	95	102	93	91	73	62	73	27	13	6	3	...	1	2,266
Country.........	1,439	289	139	83	75	175	84	130	188	228	227	214	234	250	300	298	373	297	313	263	189	121	43	9	5	34	6,000
Total	2,556	514	212	142	121	263	127	209	304	386	412	388	392	412	471	460	531	410	419	357	228	139	51	12	5	37	9,558
Females—																											
Sydney	308	60	13	10	4	15	9	16	39	43	37	43	32	50	30	38	35	20	47	33	14	2	1	...	...	...	899
Suburbs.........	650	163	40	37	16	78	15	31	57	89	85	92	71	65	56	64	66	62	81	61	51	20	8	2	2	1	1,963
Country.........	1,177	251	113	74	49	160	75	115	116	138	116	132	120	121	109	154	138	149	193	168	106	56	20	7	2	7	3,866
Total	2,135	474	166	121	69	253	99	162	212	270	238	267	223	236	195	256	239	231	321	262	171	78	29	9	4	8	6,728
Total, both sexes	4,691	988	378	263	190	516	226	371	516	656	650	655	615	648	666	715	770	641	740	619	399	217	80	21	9	45	16,286

Deaths of aged persons.

The number of persons of the age of
died during the year was 2,085, and of
874 females. The numbers in the cit
and in the country districts, are giv
There were 1,359 between the ages
between 80 and 90 years, 101 betwee
centenarians. One male, aged 100, di
101, at East Macquarie; one, aged 1
103, at George-street Asylum, Parrama
St. Alban's. Four females of the age
wick, Canterbury, Mudgee, and Gosfor

Average age at death.

The next table gives the average a
dying in the Colony during the last te
average age of those who were over 5 y

Year.	Males.	
	All Ages.	Over 5 yea
1882	30·05	48·17

upon the basis of a mode of classification determined upon by a joint committee appointed by the Royal College of Physicians, London; and whilst this latter includes a few important deviations from the former, the changes on the whole are in the direction of more extensive exemplification, so that the admirable system of Dr. Farr still forms the groundwork of the new classification.

Deaths from each cause.

The number of deaths from each cause during the year 1891 is here given, together with the proportion; those for the metropolis and the country districts being recorded separately. For purposes of comparison, the causes of death from 1884 to 1891, arranged in classes according to the new system, will be found in the table immediately following the death-roll for 1891.

Sydney and Suburbs.

Class.	Causes of Death.	Under 5 Years.		Over 5 Years.		Total.	Proportion per cent.
		Male.	Female.	Male.	Female.		
I.	Specific febrile, or zymotic diseases	324	295	201	237	1,057	16·47
II.	Parasitic diseases	4	3	9	7	23	·36
III.	Dietetic diseases	49	32	36	9	126	1·96
IV.	Constitutional diseases.	84	54	509	365	1,012	15·76
V.	Developmental diseases	138	124	76	105	443	6·90
VI.	Local diseases	678	596	946	782	3,002	46·76
VII.	Violence	51	14	247	47	359	5·59
VIII.	Ill-defined and not specified causes	192	183	14	9	398	6·20
	All causes	1,520	1,301	2,038	1,561	6,420	100·00

Class I.—Specific Febrile or Zymotic Diseases.

Order 1. *Miasmatic Diseases.*—Chicken-pox, 1; scarlet fever, 20; influenza, 242; whooping-cough, 98; diphtheria, 179; cerebro-spinal fever, 2; typhoid fever, enteric fever, 109.

Order 2. *Diarrhœal Diseases.*—Cholera, 25; diarrhœa, 288; dysentery, 17.

Order 3. *Malarial Diseases.*—Remittent fever, 1; ague, 1.

Order 5. *Venereal Diseases.*—Syphilis, 34; gonorrhœa, stricture of urethra, 5.

Order 6. *Septic Diseases.*—Erysipelas, 5; pyæmia, septicæmia, 22; puerperal fever, 8.

Class II.—Parasitic

Thrush, 6 ; hydatid disease, 16 ; worms, &

Class III.—Dietetic

Starvation, want of breast milk, 81 ; inte
lism, 36 ; (*b*) delirium tremens, 8 ; (*c*) opium

Class IV.—Constitution

Rheumatic fever, rheumatism of heart,
rickets, 1 ; cancer, 210 ; tabes mesenterica, 60
cephalus), 57 ; phthisis, 555 ; other forms of
pura, hæmorrhagic diathesis, 5 ; anæmia,
diabetes mellitus, 9 ; leprosy, 3.

Class V.—Development

Premature birth, 208 ; atelectasis, 14 ;
imperforate anus, 2 ; cleft palate, harelip,
old age, 181.

Class VI.—Local

Order 1. *Diseases of the Nervous System.*—

2; intussusception, 11; hernia, 9; peritonitis, 47; ascites, 8; gallstones, 6; cirrhosis of liver, 44; hepatitis, 16; jaundice, 21; other diseases of liver, 32; other diseases of the digestive system, 6.

Order 6. *Diseases of the Lymphatic System and Ductless Glands.*—Diseases of lymphatic system, 6; diseases of spleen, 1; bronchocele, 4 Addison's disease, 3.

Order 7. *Diseases of the Urinary System.*—Acute nephritis, 38; Bright's disease, 128; uræmia, 11; suppression of urine, 3; calculus, 7; hæmaturia, 1; diseases of bladder and of prostate, 14; kidney disease (undefined), 10.

Order 8. *Diseases of the Organs of Generation.*—Ovarian disease, 10; diseases of uterus and vagina, 2; disorders of menstruation, 1; pelvic abscess, 1.

Order 9. *Diseases of Parturition.*—Abortion, miscarriage, 7; puerperal mania, 3; puerperal convulsions, 15; placenta prævia, flooding, 1; other accidents of child-birth, 24.

Order 10. *Diseases of the Organs of Locomotion.*—Caries, necrosis, 8; arthritis, ostitis, periostitis, 5; others, 5.

Order 11. *Diseases of the Integumentary System.*—Carbuncle, 2; phlegmon, cellulitis, 8; ulcer, bed sores, 3; eczema, 5; pemphigus, 2; others, 2.

Class VII.—Violence.

Order 1. *Accident or Negligence.*—Fractures and contusions, 133; cuts, 6; burns, scalds, 41; sunstroke, 2; lightning, 1; poison, 5; drowning, 38; suffocation, 11; otherwise, 21.

Order 2. *Homicide.*—Murder, 12; manslaughter, 5.

Order 3. *Suicide.*—By shooting, 12; by cutting throat, 5; by poison, 13; by drowning, 1; by hanging, 10; otherwise, 1.

Order 4. *Execution.*—Judicial hanging, 1.

Order 5. *Violent Deaths not classed.*—Found drowned, 29; otherwise, 12.

Class VIII.—Ill-defined and not Specified Causes.

Dropsy, 8; atrophy, debility, inanition, 366; mortification, 1; tumor, 1; abscess, 1; hæmorrhage, 3; other ill-defined and not specified causes, 18.

MALES, 3,558; FEMALES, 2,862. TOTAL, 6,420.

COUNTRY DISTR

Class.	Causes of Death.	Under 5 Years	
		Male.	Femal
I.	Specific febrile, or zymotic diseases........	410	425
II.	Parasitic diseases	9	6
III.	Dietetic diseases.........	8	2
IV.	Constitutional diseases.	104	94
V.	Developmental diseases	185	150
VI.	Local diseases.............	947	714
VII.	Violence	86	46
VIII.	Ill-defined and not specified causes	276	227
	All causes.........	2,025	1,66

Class I.—Specific Febrile, or

Order 1. *Miasmatic Diseases.*—Chicken-
fever, 20; influenza, 746; whooping-cough
254; cerebro-spinal fever, 1; simple and ill-
enteric fever, 160.

(hydrocephalus), 58; phthisis, 498; other forms of tuberculosis, scrofula, 46; purpura, hæmorrhagic diathesis, 3; anæmia, chlorosis, leucocythæmia, 24; diabetes mellitus, 19.

Class V.—Developmental Diseases.

Premature birth, 251; atelectasis, 28; cyanosis, 36; spina bifida, 11; imperforate anus, 2; cleft palate, harelip, 3; other congenital defects, 4; old age, 711.

Class VI.—Local Diseases.

Order 1. *Diseases of the Nervous System.*—Inflammation of the brain or its membranes, 95; apoplexy, 123; softening of the brain, 32; hemiplegia, brain paralysis, 118; paralysis agitans, 6; insanity, general paralysis of the insane, 44; chorea, 1; epilepsy, 54; convulsions, 376; laryngismus stridulus, 1; idiopathic tetanus, 13; paraplegia, diseases of the spinal cord, 10; congestion of the brain, &c., 57.

Order 2. *Diseases of the Organs of Special Sense.*—Otitis, otorrhœa, disease of the ear, 2.

Order 3. *Diseases of the Circulatory System.*—Endocarditis, valvular disease, 89; pericarditis, 6; hypertrophy of heart, 15; angina pectoris, 4; syncope, 60; aneurism, 36; senile gangrene, 5; embolism, thrombosis, 17; phlebitis, 5; varicose veins, 1; heart disease (undefined), 361.

Order 4. *Diseases of the Respiratory System.*—Laryngitis, 47; croup, 172; other diseases of larynx and trachea, 10; asthma, emphysema, 57; bronchitis, 638; pneumonia, 540; congestion of the lungs, 76; pleurisy, 54; lung disease (undefined), 32.

Order 5. *Diseases of the Digestive System.*—Stomatitis, 14; dentition, 138; sore throat, quinsy, 22; dyspepsia, 12; hæmatemesis, 8; melæna, 4; diseases of the stomach, 62; enteritis, 244; ulceration of intestines, 11; ileus, obstruction of intestine, 40; stricture, or strangulation of intestine, 3; intussusception, 8; hernia, 15; peritonitis, 76; ascites, 10; gallstones, 4; cirrhosis of liver, 48; hepatitis, 18; jaundice, 21; other diseases of liver, 49; other diseases of the digestive system, 12.

Order 6. *Diseases of the Lymphatic System and Ductless Glands.*—Diseases of lymphatic system, 3; diseases of spleen, 1; Addison's Disease, 1.

Order 7. *Diseases of the Urinary System.*—Acute nephritis, 14; Bright's disease, 84; uræmia, 27; suppression of urine, 7; calculus, 9; disease of bladder and of prostate, 31; kidney disease (undefined), 10.

Order 8. *Diseases of the Organs of Gen*
diseases of uterus and vagina, 8; disorder
abscess, 1; perineal abscess, 1; diseases of

Order 9. *Diseases of Parturition.*—Abort
mania, 1; puerperal convulsions, 11; place
accidents of childbirth, 55.

Order 10. *Diseases of the Organs of Loc*
arthritis, ostitis, periostitis, 4; curvature of

Order 11. *Diseases of the Integumentary*
mon, cellulitis, 3; lupus, 1; ulcer, bed sor

Class VII.—Vio

Order 1. *Accident or Negligence.*—Fractu
shot wounds, 15; cuts, 5; burns, scalds,
3; poison, 21; bite of snake, 5; drownin
wise, 20.

Order 2. *Homicide.*—Murder, 12; mansl

Order 3. *Suicide.*—By shooting, 25; by
14; by drowning, 4; by hanging, 23; oth

Influenza.

The epidemic of influenza which first reached New South Wales in 1890 recurred in 1891 in a much more prevalent form. It is extremely probable that the great increase in that year of the number of deaths ascribed to bronchitis and pneumonia was due to the transference of cases of influenza, especially if complicated, to other diseases. Estimating from the number of deaths in the four years 1886-89, there is an excess of 966 fatal cases of influenza, and 444 of bronchitis and pneumonia during 1891, or, in other words, the probable number of deaths due to the epidemic influenza should be taken as 1,410 instead of 988.

Principal causes of death.

The following are the principal causes of death, arranged in order of fatality :—

	Number of deaths.
Phthisis	1,053
Bronchitis	1,001
Influenza	988
Accidents	493
Old age	892
Atrophy, debility (infants)	870
Heart disease (exclusive of endocarditis, pericarditis, and aneurism)	709
Convulsions	613
Diarrhœa	595
Enteritis	566
Cancer	516
Premature birth	459
Diphtheria	433
Apoplexy	283
Typhoid, enteric fever	269
Whooping-cough	261
Liver diseases	259
Croup	220
Inflammation of the brain	215
Bright's disease	212
Endocarditis and pericarditis	185
Diseases of the urinary system (exclusive of Bright's disease)	182
Tabes mesenterica	180
Paralysis	177
Childbirth and puerperal fever	165
Congestion of the lungs	125
Peritonitis	123
Suicides	119
Tubercular meningitis (hydrocephalus)	115
Tuberculosis, scrofula	105
Intemperance	97
Insanity	97
Epilepsy	92
Want of breast milk	90
Pleurisy	88
Dysentery	82
Asthma	72
Ileus, obstruction of the intestines	63
Cholera	58
Laryngitis	57
Pyæmia, septicæmia	55
Softening of the brain	52
Aneurism	51
Found drowned	49
Dropsy	47
Syphilis	46
Anæmia chlorosis, leucocythæmia	46
Rheumatism	44
Lung disease (undefined)	44
Scarlet fever	40
Murder and manslaughter	32
Diseases of spinal cord	29
Rheumatic fever and rheumatism of heart	28
Diabetes mellitus	28
Privation	25
Thrush	20
Erysipelas	16
Ulceration of the intestines	15

The following table shows the percentage of deaths to total deaths, and the rate of mortality per thousand persons living in New South Wales from the several classes of disease :—

Causes of Death.	1884.			1885.			1886.			1887.		
	Deaths.	Percentage.	Per 1,000 living.	Deaths.	Percentage.	Per 1,000 living.	Deaths.	Percentage.	Per 1,000 living.	Deaths.	Percentage.	Per 1,000 living.
Specific febrile, or zymotic diseases	2,359	16·59	2·67	2,382	15·59	2·57	2,315	15·87	2·39	1,978	14·71	1·97
Parasitic diseases	66	·47	·07	89	·58	·10	82	·56	·08	61	·45	·06
Dietetic diseases	198	1·39	·22	211	1·38	·23	198	1·36	·20	179	1·33	·17
Constitutional diseases	1,639	11·53	1·86	1,837	12·02	1·98	1,980	13·57	2·04	1,896	14·10	1·89
Developmental diseases	1,270	8·93	1·44	1,326	8·68	1·43	1,285	8·81	1·33	1,128	8·39	1·12
Local diseases	6,343	44·60	7·18	6,951	45·48	7·50	6,482	44·44	6·69	6,110	45·43	6·08
Violence	990	6·96	1·12	1,106	7·24	1·19	1,083	7·42	1·12	1,148	8·54	1·14
Ill-defined and not specified causes	1,355	9·53	1·53	1,380	9·03	1·49	1,162	7·97	1·20	948	7·05	·94
	14,220	100·00	16·09	15,282	100·00	16·49	14,587	100·00	15·05	13,448	100·00	13·37

Causes of Death.	1888.			1889.			1890.			1891		
	Deaths.	Percentage.	Per 1,000 living.	Deaths.	Percentage.	Per 1,000 living.	Deaths.	Percentage.	Per 1,000 living.	Deaths.	Percentage.	Per 1,000 living.
Specific febrile, or zymotic diseases	2,143	14·87	2·07	2,497	16·88	2·34	2,022	14·22	1·84	2,917	17·91	2·55
Parasitic diseases	53	·37	·05	68	·46	·06	71	·50	·06	55	·34	·05
Dietetic diseases	183	1·27	·18	289	1·95	·27	235	1·65	·21	212	1·30	·19
Constitutional diseases	2,111	14·65	2·04	2,018	13·64	1·89	1,988	13·98	1·80	2,141	13·15	1·87
Developmental diseases	1,195	8·30	1·15	1,277	8·63	1·20	1,322	9·30	1·20	1,489	9·14	1·30
Local diseases	6,543	45·41	6·32	6,615	44·71	6·20	6,587	46·33	5·98	7,301	44·83	6·38
Violence	1,140	7·91	1·07	1,110	7·50	1·04	1,163	8·18	1·06	1,165	7·15	1·02
Ill-defined and not specified causes	1,040	7·22	1·00	922	6·23	·86	830	5·84	·75	1,006	6·18	·88
	14,408	100·00	13·88	14,796	100·00	13·86	14,218	100·00	12·90	16,256	100·00	14·24

ACCIDENTS.

Accidental deaths.

Accidental deaths are very numerous, especially in the country. The number registered during 1891 was 943, or 258 in the metropolis and 685 in the country districts. The numbers for 1890 were 214 and 758 respectively. An increase is therefore apparent in the metropolis, and a corresponding decrease in the country districts. The number of fatal accidents in the colony during each of the years 1885 to 1891 inclusive was as follows:—

	1885.	1886.	1887.	1888.	1889.	1890.	1891.
Sydney and suburbs ...	281	225	211	272	247	214	258
Country	676	637	692	628	658	758	685
	957	862	903	900	905	972	943

In the following table a more detailed account will be found of the various fatal accidents during the last ten years :—

	Fractures, Contusions.	Gunshot Wounds.	Cuts, &c.	Burns, Scalds.	Sunstroke.	Lightning.	Poison.	Bite of Snake or Insect.	Drowning.	Suffocation.	Otherwise.	All cases.		
												M.	F.	Total
1882	351	23	15	96	36	*	38	...	216	29	6	660	150	810
1883	310	25	14	85	21	*	44	4	213	35	12	594	169	763
1884	403	24	19	95	41	*	42	8	203	29	8	685	187	872
1885	448	13	23	121	34	*	41	3	222	42	10	755	202	957
1886	357	23	14	114	37	3	12	5	210	60	27	670	192	862
1887	352	11	18	93	24	2	16	3	228	129	27	727	176	903
1888	396	28	22	133	37	5	15	5	176	42	41	713	187	900
1889	417	15	13	101	29	7	24	4	204	54	37	713	192	905
1890	394	16	9	103	17	6	21	10	319	37	40	770	202	972
1891	406	15	11	119	13	4	26	5	251	52	41	780	163	943
Total ...	3,834	193	158	1,060	289	27	279	47	2,242	509	249	7,067	1,820	8,887

* Included with "Sunstroke" during these years.

Average rate of accidents.

The average annual rate of accidents during the ten years 1882 to 1891 has been 91 per 100,000 of the population. This, although much lower than in Queensland, is higher than in the other colonies,

or in any country whose records are
will be seen from the following statem

New South Wales	91	Italy
Victoria	83	Germ
Queensland	141	Prus
South Australia	63	Aust
Tasmania	69	Hung
New Zealand	84	Belgi
England and Wales	54	Norw
Scotland	68	Swed
Ireland	35	Russ
France	34	Unit
Spain	21	Denn
Switzerland	69	

SUICIDES

Number and modes of suicides.

The number of suicides registered du
and the various modes adopted by the s

Year.	Shooting.		Cut, Stab, &c.		Poison.		Drown ing.
	M.	F.	M.	F.	M.	F.	M.

poison in 1890, fourteen in 1889, and eighteen in 1888. Two of the suicides selected prussic acid as a means of procuring death, while two took strychnine, two spirits of salt, one chloroform, and one arsenic. In eleven cases of suicide by poison, the name of the particular poison used was not mentioned.

Proportion of suicides to total deaths.

The following table shows the number of suicides and proportion to total deaths for the last ten years:—

Year.	Suicides by males.		Suicides by females.		Total Suicides.	
	No.	Per thousand of total deaths of males.	No.	Per thousand of total deaths of females.	No.	Per thousand deaths.
1882	44	5·79	11	2·11	55	4·29
1883	51	7·17	3	·58	54	4·41
1884	66	7·93	15	2·54	81	5·70
1885	81	9·10	14	2·19	95	6·22
1886	82	9·64	13	2·13	95	6·51
1887	97	12·47	24	4·23	121	9·00
1888	102	12·07	30	5·04	132	9·16
1889	89	10·24	23	3·74	112	7·55
1890	94	11·35	24	4·04	118	8·30
1891	100	10·46	19	2·82	119	7·31

Proportion to population.

In proportion to the whole population the yearly number of suicides is very light, and bears favourable comparison with Victoria, Queensland, and Western Australia. For the sake of clearness the rates in the following table are for every 100,000 of the population:—

Year.	Number of suicides.	Per 100,000 of mean population.
1882	55	6·9
1883	54	6·4
1884	81	9·2
1885	95	10·3
1886	95	9·8
1887	121	12·0
1888	132	12·7
1889	112	10·5
1890	118	10·7
1891	119	10·4
	Mean............	9·9

Suicides in New South Wales compared with other colonies.

The mean rate of the whole of Aus slightly higher than in New South W however, all the colonies, Tasmania somewhat unfavourably with Great averaging 7·9 per 100,000 of populati and 5·6 in Scotland. The following deaths from suicide in the Australasian

Colony.
Tasmania
New Zealand
South Australia
New South Wales
Victoria
Western Australia
Queensland
Australasia

The above are the mean annual rates

completed year of life. This last is what is usually called the expectation of life, and is so called in the life-table which will be found annexed.

Data required for a life table.

The data required for a life-table are the number of persons living, as ascertained by an exact enumeration of the people, and the number of deaths recorded at each year of age. Experience, however, shows that neither in the case of one set of facts nor in the other is absolute exactitude attainable; for, without regarding those who deliberately misstate their age at the time of the census, there are always some, and by no means a few, who either do not know the year of their birth, or in the census paper return themselves as at the nearest decennial age. Thus it is the universal experience of those who have compiled a population census that the number of persons at age 40, for example, largely exceeds that at 38, 39, 41, or 42, and similarly with 50 and other decennial ages. There is a tendency, but not to so marked an extent, for persons near the quinquennial ages, if they may so be termed, viz., 35, 45, 55, &c., to return themselves as at these ages and not at their true age. The ages of persons dying are stated with more exactitude, although there is a tendency for the ages to group themselves round the decennial ages. It is necessary in a life-table to make allowance for the bias or personal equation which the statements of ages exhibit, otherwise the expectations of life when plotted to a scale would exhibit a series of angular points, instead of the rather graceful curves which the diagram shows. Dr. Farr, to whose labours the world owes the first English life-table, adopted a system of adjustment which effectually smoothed off the angular points to which allusion has been made; but it is now recognised that this smoothing process was too effectual, and the variations from uniformity at certain ages, arising from change of life, from the effects of climate and environment, or from emigration, are altogether lost. Since the compilation of the fourth or last English life-table by Dr. Ogle, the question of adjustment has been very fully discussed and the method used by Mr. W. S. B. Woolhouse, in adjusting the graduation of the tables of mortality adopted by the Institute of Actuaries, has met with general approval; and it is the system of Woolhouse that has been used in calculating the mortality on which the tables are based.

Data used to compile present table.

The ages assumed were those ascertained at the census taken on the 5th April, 1891, and the deaths those registered as occurring during the twelve months preceding and the twelve months following the day of the census. The number of persons dealt with was 1,123,954, being the population of the Colony, less the aborigines; and the number of deaths in the two years, 30,504. It may be well to note at this stage that the death-rate of 1891 was very considerably augmented by the influenza epidemic, an abnormal proportion of deaths occurring amongst aged persons, especially females. This is a circumstance which should be taken into account in comparing life-tables hereafter compiled with the one now presented.

Use of life-tables.

The necessity for exact data in calculating life contingencies brought into existence the first life-table; but there are uses to which it may be put that are entirely apart from the requirements of the actuary. If the progress of medicine, viewed as the art of prolonging life, is to be measured, the only gauge which can be applied is the life-table; and it is held to be very positive evidence of the improved condition of the people, that in the forty years that elapsed between the compilation of Dr. Farr's first table of the expectation of life, and that by Dr. Ogle, there was an improvement of 1½ years in the expectation at birth.

It is impossible to compare the expectation of life now ascertained for New South Wales with that of past years, as this is the first time that the expectation has been ascertained; but a few comparisons with Dr. Ogle's table for England may not be without interest. First, however, it may be well to allude to several material points which should be kept in view in dealing with the New South Wales table.

Composition of the population.

The population of the Colony is composed of two-thirds of native born and one-third of British or foreign parentage; and of the persons over 16 years of age, about one-half belong to the latter category. The average length of time which the non-Australian-born have spent in the Colony cannot, of course, be determined; but it must be abundantly plain that there is a very large number of persons in New South Wales whose past life has been very little influenced by Australian conditions. Thus the mortality experience which the tables and the diagram show is in reality of two kinds. The earlier ages are practically purely Australian, whilst the later ages are partly Australian and partly British and foreign, the latter element getting stronger as the ages advance. Therefore, though the expectation here given is correct as regards the population as at present constituted, it might not be so if the Australian-born element predominated as largely at every age as it does at the earlier periods. No attempt is made to differentiate the two elements of population, with a view of discovering whether it is true, as is sometimes assumed, that the conditions in Australia are favourable for early and middle life, but not for old age, or whether the very marked superiority of the Australian over the European death-rate for early ages is maintained throughout all the ages. The data by means of which such could be done are lacking. It may be here sufficient to say that there is evidence to show that the admixture of non-Australian-born has not improved the expectation of life at the ages where their presence is of importance.

Expectation of life in N. S. Wales.

An inspection of the diagram will show that the expectation of life, according to the New South Wales life-table, is greater for males for every year up to 84 than under the English life-table of Dr. Ogle. At birth (age 0 of the table) the difference in the expectation is 8¼ years, at 5 years of age 4·03, at 10 years it is 3·29 years, at 30 2·2 years, and at 60 years 0·46. For females up to 64 years much the same results are shown. Thus, at age 0 the New South Wales expectation exceeds the English by 8·28 years, at 5 years by 4·34, at 10 years by 3·63, at 30 years the difference is 2 years, at 60 it is 0·27 years. At ages above 64 the expectation for females is higher according to the English table than in that of New South Wales. It must not be supposed, however, that this means that the superiority of the ages below 84 for males and 64 for females is lost after those years are attained. Such is not the case. It is true that there are more deaths compared with the population at ages above those quoted in New South Wales than in England, but it is also true that a larger proportion is then surviving in New South Wales than in England. Thus out of 100,000 males born in New South Wales 5,920 will survive until 84, whereas in England the number is only 3,813. Similarly at age 90 the survivors in New South Wales would be 1,156, whereas in England they would number 802 only. The figures in regard to females show much the same proportions. Out of 100,000 females born in New South Wales 48,725 would survive till 64, against 37,049 in England; 37,570 would live till 70 years of age, against 27,723 in England; at age 80 the numbers were 13,657 and 10,894, and at age 90 1,630 and 1,423.

Explanation of the diagram.

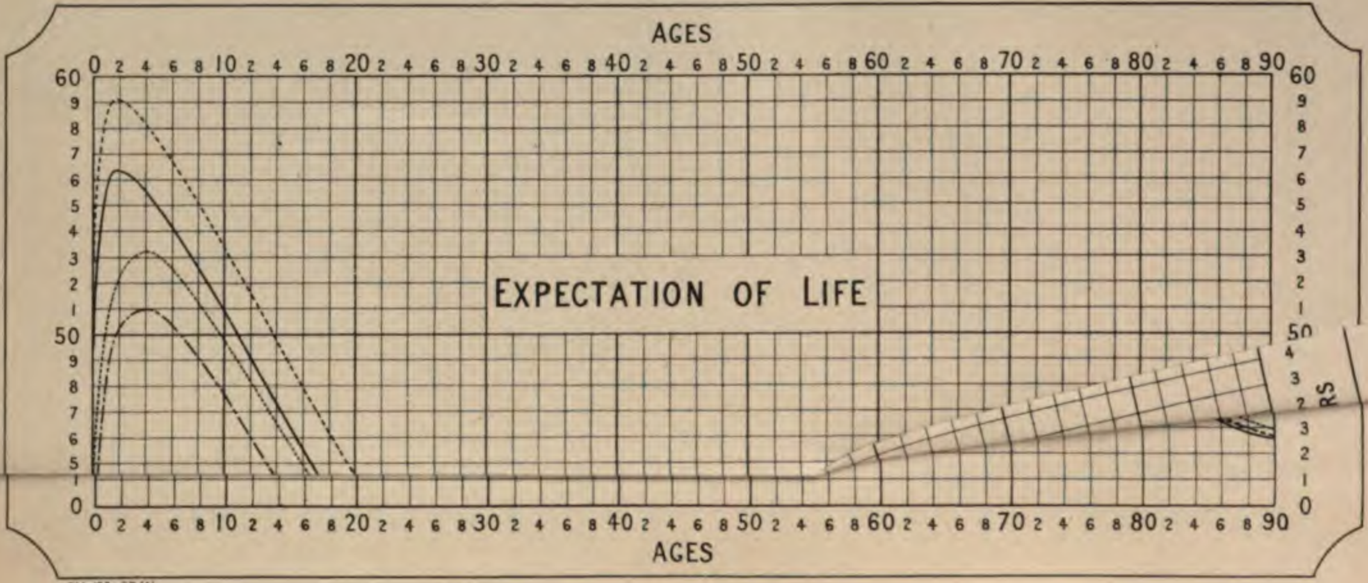
On the diagram the expectation of life for males and females is shown for New South Wales and for England, according to what is known as the new English life table of Dr. Farr. In eachi nstance the expectation for females exceeds that for males, varying in the case of New South Wales from 3·3 at age 0 to 2·5 years at 10 years, the curve approaching nearer and nearer as the ages increase, until the lines become almost merged in one another. Neither the English life tables, as computed by Dr. Farr and Dr. Ogle, nor that computed by the author for New South Wales, show that the expectation of life of women of the reproductive age, say 15 to 45 years, falls nearer to that of males than at other ages. Whatever may be the risks attendant on child-bearing, it seems they do not affect the death-rate of females more largely than accidents or other risks to which males are liable at the same ages. The following is the table of the Expectation of Life for New South Wales:—

Expectation of Life—Males.

Age.	Expectation of living a year.	Expectation of dying in a year.	Average duration of life.	Age.	Expectation of living a year.	Expectation of dying in a year.	Average duration of life.	Age.	Expectation of living a year.	Expectation of dying in a year.	Average duration of life.
0	·8722600	·1277400	49·60	31	·9928036	·0071964	33·54	61	·9650778	·0349222	13·02
1	·9719879	·0280121	55·78	32	·9926016	·0073984	32·77	62	·9617963	·0382037	12·47
2	·9873909	·0126091	56·37	33	·9922719	·0077281	32·02	63	·9581808	·0418192	11·95
3	·9920202	·0079798	56·09	34	·9919489	·0080511	31·26	64	·9544581	·0455419	11·45
4	·9935094	·0064906	55·54	35	·9915767	·0084233	30·51	65	·9511891	·0488109	10·97
5	·9940609	·0059391	54·90	36	·9910973	·0089027	29·76	66	·9491130	·0508870	10·51
6	·9954520	·0045480	54·22	37	·9906768	·0093232	29·03	67	·9469494	·0530506	10·04
7	·9965826	·0034174	53·41	38	·9903885	·0096115	28·30	68	·9446631	·0553369	9·58
8	·9974189	·0025811	52·65	39	·9900638	·0099362	27·57	69	·9419265	·0580735	9·11
9	·9979421	·0020579	51·78	40	·9896719	·0103281	26·84	70	·9377764	·0622236	8·64
10	·9981725	·0018275	50·89	41	·9892689	·0107311	26·11	71	·9317183	·0682817	8·22
11	·9980949	·0019051	49·98	42	·9887049	·0112951	25·39	72	·9244133	·0755867	7·75
12	·9979674	·0020326	49·08	43	·9879420	·0120580	24·68	73	·9169053	·0830947	7·34
13	·9977893	·0022107	48·18	44	·9872296	·0127704	23·97	74	·9089223	·0910777	6·96
14	·9975604	·0024396	47·28	45	·9866157	·0133843	23·27	75	·9014884	·0985116	6·51
15	·9972301	·0027699	46·40	46	·9861989	·0138011	22·58	76	·8948647	·1051353	6·27
16	·9970221	·0029779	45·52	47	·9858149	·0141851	21·89	77	·8889300	·1110700	5·95
17	·9965866	·0034134	44·66	48	·9853850	·0146150	21·20	78	·8824101	·1175899	5·63
18	·9961593	·0038407	43·81	49	·9848244	·0151756	20·51	79	·8757080	·1242920	5·32
19	·9957653	·0042347	42·98	50	·9838093	·0161907	19·82	80	·8690262	·1309738	5·00
20	·9954553	·0045447	42·16	51	·9821404	·0178596	19·13	81	·8607608	·1392392	4·68
21	·9951667	·0048333	41·35	52	·9804566	·0195434	18·47	82	·8501261	·1498739	4·36
22	·9949639	·0050361	40·54	53	·9789641	·0210359	17·83	83	·8362763	·1637237	4·04
23	·9947709	·0052291	39·75	54	·9771110	·0228890	17·20	84	·8197635	·1802365	3·73
24	·9945492	·0054508	38·95	55	·9758044	·0241956	16·58	85	·7995055	·2004945	3·44
25	·9942850	·0057150	38·16	56	·9752044	·0247956	15·99	86	·7750000	·2250000	3·18
26	·9940897	·0059103	37·38	57	·9740342	·0259658	15·39	87	·7485866	·2514134	2·96
27	·9937435	·0062565	36·60	58	·9724615	·0275385	14·79	88	·7281208	·2718792	2·79
28	·9934788	·0065212	35·83	59	·9709995	·0290005	14·19	89	·7053081	·2946919	2·64
29	·9932225	·0067775	35·06	60	·9686662	·0313338	13·60	90	·6842561	·3157439	2·54
30	·9930151	·0069849	34·30								

for the "solution of all questions d
human life":—

Age.	New South Wales.	
	M.	F.
Birth	49·6	52·9
5 years	54·9	57·4
10 ,, ...	50·9	53·4
15 ,, ...	46·4	48·8
20 ,, ...	42·2	44·5
25 ,, ...	38·2	40·3
30 ,, ...	34·3	36·4
35 ,, ...	30·5	32·6
40	26·8	29·0



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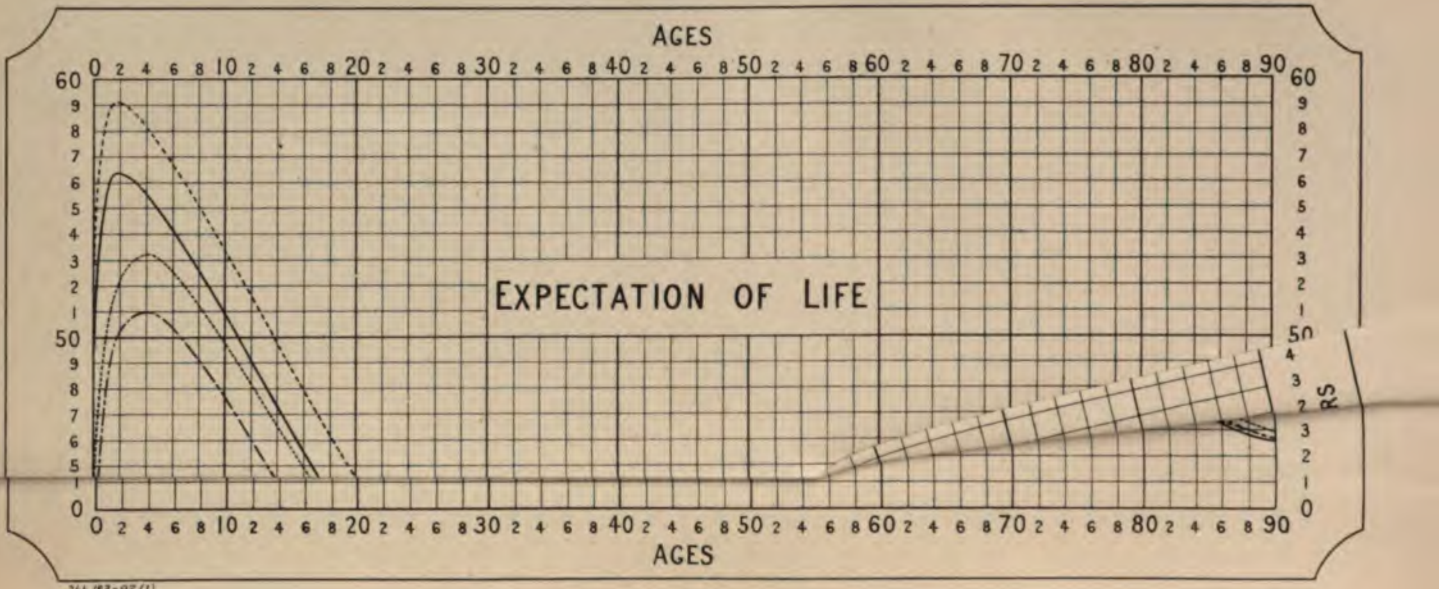
for the "solution of all questions d
human life":—

Age.	New South Wales.	
	M.	F.
Birth	49·6	52·9
5 years	54·9	57·4
10 ,, ...	50·9	53·4
15 ,, ...	46·4	48·8
20 ,, ...	42·2	44·5
25 ,, ...	38·2	40·3
30 ,, ...	34·3	36·4
35 ,, ...	30·5	32·6
40 ,, ...	26·8	29·0


EXPECTATION OF LIFE

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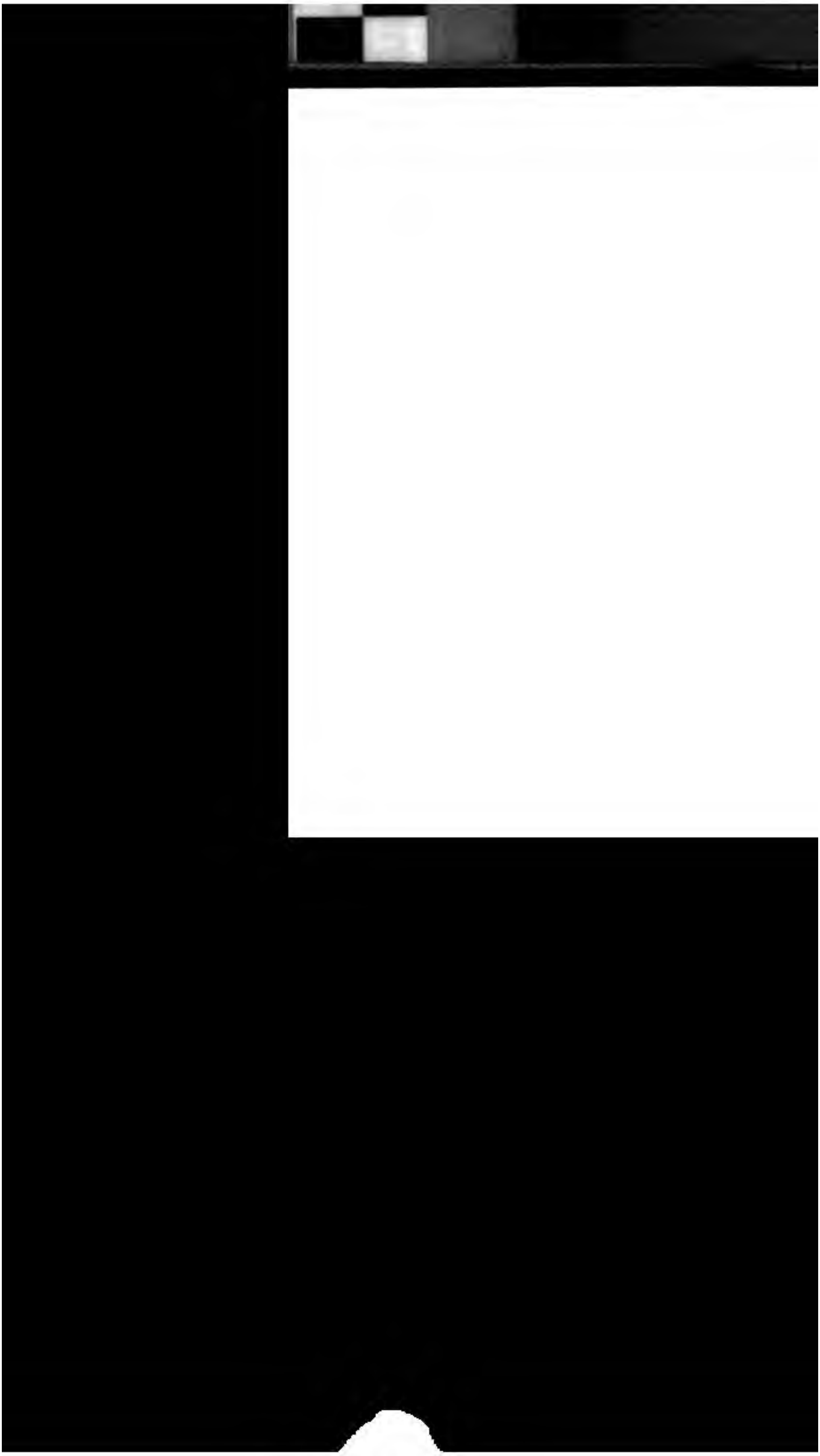

NATURALIZATION.

Law relating to aliens.

Denization Act.

The law relating to the naturalization of foreigners in New South Wales is mainly contained in two statutes. The first of these is the Denization Act of 1828, 9 George IV, No. 6. This Act enables the Governor, or Acting Governor, to grant letters of denization to such foreigners as may arrive in the Colony with a recommendation to that effect from the Principal Secretary of State for the Colonies, such letters of denization to entitle the holder to all the rights, privileges, and advantages in the Colony which a British-born citizen could claim. The second enactment bearing upon the question is that known as the Naturalization Act of New South Wales, 39 Victoria, No. 19, which was passed in 1875, and assented to in 1876, having been reserved for the Queen's pleasure. This Act provides that an alien in New South Wales may hold and acquire real and personal property, but shall not be qualified for any office nor enjoy either a municipal or parliamentary franchise; he shall not be qualified to be the owner of a British ship, nor have any rights and privileges except such as are expressly conferred upon him. After a residence in the Colony of not less than five years a foreigner may apply for letters of naturalization, and the Governor may give or withhold the same as he thinks best for the public good. Such letters if granted are to be of no effect until the oath of allegiance has been taken, after which the holder becomes in every respect entitled to all the privileges which attach to those who are British by birth. The only case in which naturalization is no longer permitted is in regard to the Chinese, which was provided for by special legislation, as will be shown hereafter.

Naturalization Act.

Naturalization of Germans.

There were 193 foreigners naturalized in this Colony during the year 1891. Their length of residence in New South Wales ranged from five to forty-one years. Twenty had been resident more than twenty years in the Colony. Of European races the Germans have availed themselves most largely of the privileges of naturalization, the number of certificates issued to them amounting to nearly one-fourth of the total number granted within the past ten years. The following table shows the native countries of those colonists who obtained certificates of naturalization during each year, from 1882 to 1891:—

Native Countries.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.*	Total
France	3	4	3	10	8	8	7	9	6	9	67
Spain	...	...	1	...	...	...	1	...	1	1	4
Portugal	1	1	...	...	...	...	3	2	...	1	8
Switzerland	...	4	4	1	3	1	1	3	5	3	25
Italy	3	4	3	4	5	6	6	5	5	8	49
Germany	32	46	44	47	45	48	32	58	34	55	441
Austria	1	3	8	1	5	3	3	6	3	10	43
Holland	...	2	2	1	2	3	1	2	3	2	18
Belgium	...	...	...	...	2	...	...	...	...	...	2
Denmark	5	12	11	7	18	19	10	15	9	21	127
Norway	1	3	6	3	4	5	9	8	3	14	56
Sweden	5	13	8	17	10	13	17	13	18	41	155
Russia	2	2	3	7	6	3	5	5	7	18	58
Poland	...	2	4	4	4	3	5	1	2	...	25
Greece	1	2	1	1	2	3	2	4	...	2	18
Turkey	...	...	...	...	...	...	...	1	...	...	1
Bulgaria	...	...	1	...	...	...	...	...	...	...	1
Roumania	...	...	...	...	...	...	1	1	...	...	2
China	93	301	265	22	5	1	...	...	...	...	687
Syria	...	...	...	...	...	...	3	...	...	...	3
Penang	...	...	...	...	...	1	...	...	...	...	1
Persia	...	1	...	...	...	...	...	...	...	...	1
Egypt	...	...	...	...	...	...	...	1	1	...	2
America	...	4	2	...	...	1	...	3	...	...	10
United States	...	1	...	2	1	...	...	...	1	1	6
Western Islands	...	...	...	1	4	...	...	...	...	1	6
Corsica	...	1	...	...	...	...	...	...	...	...	1
New Caledonia	...	...	...	...	...	1	...	...	...	...	1
Japan	...	...	...	...	...	...	...	...	1	...	1
Unknown	...	...	1	...	...	...	...	...	...	6	7
Total	147	406	367	128	124	119	106	137	99	193	1,826

* Amended since the publication of the Statistical Register.

Large number of Chinese naturalized.

From this it will be seen that the Chinese have, until late years, more than any other nation, evinced a desire to become British subjects; and the tendency is even more marked in Victoria, where, out of 3,621 persons naturalized during the ten years from 1879 to 1888, no fewer than 2,939 were born in China, the greatest number naturalized in any one year being 1,178 in 1885. The result of the Conference held in Sydney in 1888, reference to which is made a few pages further on, has been to place a bar to the naturalization of the Chinese as well as to restrict the numbers arriving in the Colonies. The total number of persons naturalized in New South Wales from 26th July, 1849, to 31st December, 1891, was 6,244.

Callings of persons naturalized.

Of those naturalized during 1891, there were 1 agent, 1 architect's assistant, 1 auctioneer, 2 bakers, 1 botanical collector, 1 basket maker, 2 bootmakers, 1 boatman, 1 builder, 1 brickmaker, 1 blacksmith, 1 billiard-table maker, 1 coal trimmer, 3 clerks, 1 coach builder, 1 caretaker, 3 carriers, 3 chemists, 7 carpenters, 1 cook, 1 cooper, 2 civil engineers, 8 coal lumpers, 3 dealers, 1 draper, 1 dredgeman, 1 engine driver, 1 engineer, 1 fettler, 6 farmers, 3 fish and oyster-mongers, 2 gas-stokers, 5 gardeners, 1 hair-dresser, 1 herbalist, 2 hotel-keepers, 1 inspector of conditional purchases, 2 jewellers, 33 labourers, 6 miners, 2 merchants, 1 manager of sugar company, 3 painters, 1 photographer, 1 pawnbroker, 1 doctor of philosophy and agriculturist, 2 quarrymen, 2 rifle-makers, 1 railway employé, 1 stonemason, 1 surveyor, 1 sawyer, 1 stock and station agent, 2 storemen, 13 storekeepers, 2 shipwrights, 27 seamen, 1 ship carpenter, 4 tailors, 1 tobacconist, 1 tanner, 1 teacher, 1 watchmaker, 4 wharf labourers, 1 wool scourer, 1 waterproof manufacturer, 1 woolbroker.

CHINESE POPULATION.

Chinese undesirable a colonists.

The uniformity with which the different colonies have passed laws restricting the immigration of Chinese, and prohibiting their landing, except upon payment of a heavy poll-tax, may be taken as some evidence of the undesirability of the race as colonists. At the census of 1861 there were in the Colony 12,988 Chinese; in 1871 the number had fallen to 7,220; rising again in 1881 to 10,205, and to 15,445 at the end of 1888, since which time the departures have been very numerous, only 13,289 Chinese having been enumerated

Immigration and emigration of Chinese.

in April, 1891. For many years New South Wales offered little inducement to the Chinese as a place of settlement, the superior attractiveness of Victoria and other colonies, as gold producers, claiming their attention. At the rush to Lambing Flat in 1860, however, large numbers of Chinese came across the border and established themselves in this Colony, their strength being constantly recruited by fresh arrivals from China; but these Chinese did not remain in the Colony, for at the census of 1871 there were 5,768 less than ten years previously.

The numbers of Chinese arriving at and departing from New South Wales since 1871 will be found in the following table:—

Year.	Arrivals.	Departures.	Year.	Arrivals.	Departures.
1871	426	441	1882	1,007	884
1872	229	597	1883	1,936	1,402
1873	406	400	1884	2,191	1,038
1874	863	933	1885	2,929	1,726
1875	625	1,209	1886	3,092	1,883
1876	696	940	1887	4,436	2,773
1877	884	490	1888	1,848	1,562
1878	2,485	1,560	1889	7	941
1879	1,979	557	1890	15	637
1880	2,942	876	1891	17	581
1881	4,465	929			

Influx of Chinese to New South Wales.

It will be seen that 1878 and the following years are marked by a large increase in the arrivals from China. The influx appeared in 1881 sufficiently formidable to demand the interference of the Legislature. Accordingly, the "Influx of Chinese Restriction Act" was passed, with the result that the subsequent year was marked by a decrease in the arrivals to the extent of 3,458, since which time there has been a steady increase until 1888, when legislation again stepped in, this time with more stringent regulations, to restrict the numbers arriving on these shores. The increasing desire on the part of the Chinese to migrate to Australia had brought about considerable discussion, which culminated in a Conference of delegates from all the colonies being held in Sydney in 1888. As a result, the Conference

Restrictive legislation.

prepared a draft bill, which was afterwards submitted to the Parliaments of the different colonies. The bill provided that more stringent regulations should be enforced to check the influx of Chinese to these shores; and although it was not deemed advisable that their landing should be prohibited altogether, yet it was considered necessary that such a limit should be placed to the numbers privileged to land as would prove an efficient check to Chinese immigration. Before the Conference met, progress had been made inthe New South Wales Legislature with a bill which was proceeded with after the Conference adjourned, and became law on the 11th July, 1888. By this measure vessels are prohibited from carrying to the Colony more than one Chinese passenger to every 300 tons; Chinese landing are to pay a poll-tax of £100, and are not to engage in mining, without express authority under the hand and seal of the Minister of Mines, nor are they permitted to become naturalized. The penalty for a breach of the Act is £500. The Act has operated to the entire cessation of Chinese immigration. How greatly the number of arrivals of Chinese has fallen off during the last ten years will be seen from the table following, which also shows the number who have paid the poll-tax during the same period:—

Year.	Chinese arriving.	Chinese paying Poll-tax.
1882	1,007	852
1883	1,936	1,220
1884	2,191	1,074
1885	2,929	1,060
1886	3,092	1,284
1887	4,436	1,798
1888	1,848	462
1889	7	1
1890	15	3
1891	17	1

Chinese in the colonies in 1891.

At the census of 1891, there were 41,534 Chinese recorded in the Australasian colonies, as shown in the table following. When the census of 1881 was taken the total number in the colonies was set down as 43,706, which is 2,172 more than the number in 1891 :—

Colony.	Number.
New South Wales	13,286
Victoria	9,377
Queensland	8,574
South Australia	3,997
New Zealand	4,444
Tasmania	939
Western Australia	917
Total	41,534

ABORIGINES.

Aborigines.

This name, signifying "from the origin," was given to the earliest known inhabitants of Italy, but is now applied to the original or primitive inhabitants of any country. As the history of the native race in these colonies is so entwined with the progress of the British people in Australia, a few words concerning them may not be out of place. The aborigines of Australia form a distinct race, and it may be presumed that the whole of them throughout the continent sprang from the same stock, although it is remarkable that their languages differ so greatly that tribes within short distances of each other are often quite unable to understand each other; and in fact almost every large community of natives has its own peculiar dialect. It is difficult to form a correct estimate of their numbers, and while there is reason to believe that some generations ago they were very numerous, there is ample evidence of late years that in many places they are decreasing; and they may now be counted by fives where they were formerly counted by hundreds. In Tasmania they have disappeared altogether, the last of the tribe in that colony having died in 1876.

Estimate by Governor Phillip.

It is recorded that Governor Phillip estimated the aboriginal population about the close of the last century at one million; the number between Broken Bay and Botany Bay appearing to have been about 3,000. It is impossible to say how far this estimate was in accordance with fact; for, although at the time it did not probably seem an exaggerated conjecture in the face of so large a number as 3,000 having been found within the small area between the bays above mentioned; yet, considering how small a portion of the territory was then explored by the early settlers, the statement must be accepted as what it professes to be, namely, an estimate at a time when the data to hand were very limited. At the Census of 1891 the aborigines in Australia, exclusive of Queensland (in which colony the aborigines were not even estimated), were said to number 38,304, distributed as follows :—

Aborigines at census of 1891

Colony.	Males.	Female.	Total.
New South Wales	4,559	3,721	8,280
Victoria	325	240	565
South Australia	14,510	9,279	23,789
Western Australia............	3,223	2,447	5,670
Total	22,617	15,687	38,304

The Maoris.

The original inhabitants of New Zealand, or Maoris, as they are called, are quite a different race. They are gifted with a considerable amount of intelligence, quick at imitation, and brave even to rashness; on the other hand they are avaricious, and ofttimes ferocious. According to the census of 1881 they numbered 44,097. Like the Australian aborigines they appear to be decreasing in number, the census of 1886 enumerating only 41,432, although at that of 1891 the total was 41,523. It is believed, however, that at the time the colonists first landed their number was fully 120,000.

Aborigines decreasing.

According to the Census of 1891 there were 8,280 aborigines in New South Wales. This total includes half-castes, who numbered 3,183. The number of aborigines under the control of the Aborigines Protection Society at the end of the year 1891 was

7,473, of whom 4,458 were full-blood. This shows a decrease on the return for the end of 1890 of 235 full-blood, and an increase of 8 half-castes, or a net decrease for the year 1891 of 227. The number of births reported during 1891 was 258 (133 of the children being half-castes), and the deaths 257 (50 half-castes). There are three mission stations under the control of the Board. These establishments, when first formed, were little more than camping grounds for the aborigines, where they worked for their rations, elementary instruction being imparted to the children, but now they have developed into settlements, with greatly improved huts for married couples, and adequate accommodation for teaching, duly qualified instructors having been appointed by the Department of Public Instruction. During the year, 7,985 blankets were forwarded from the Government Stores Department to the various Benches of Magistrates for distribution among the blacks. This bounty has been conceded for many years. At the census of 1881 only 4,673 were enumerated, but the returns for 1891 must not be taken as showing an increase, but as proving that at the previous census the aboriginals passed over as being in a wild state far outnumbered those within the bounds of civilization.

Crimes and misfortunes of native blacks.

It has been the misfortune of the aborigines of Australia, as it was of the Carribee, the North American Indian, and the Hottentot, to be found in the way of European colonization; and the blacks have not seen the white man take possession of their territory without many an attempt, by deeds of cunning and of blood, to stop the invasion and to avenge the injury. It would be easy to gather from the records of British colonization in Australia many instances of horrible crimes committed by the aborigines, who are, in fact, partakers of the worst passions of human nature. But it must not be forgotten that, amongst the people of British origin who settled upon the land formerly occupied by the blacks alone, were many whose crimes against the aborigines at least equalled in atrocity any committed by that unfortunate race. Cunning and ferocity were the natural concomitants of such a struggle; and the remembrance of what cunning and ferocity have done

Oral traditions.

tends to make the colonists slow to recognize any characteristics of an opposite kind in the blacks. There is, however, evidence from their songs and their cherished traditions,* that they are by no means destitute of some qualities in which civilized men glory—such as the power of inventing tragic and sarcastic fiction, the thirst for religious mystery, stoical contempt of pain, and reverence for departed friends and ancestors. The manner in which they have displayed these characteristics presents such a strange mixture of wisdom and folly, of elevating and degrading thoughts, of interesting and of repulsive traditions, of pathetic and grotesque observances, that, in order to account for the apparent contradictions, recourse must be had to the supposition that this race has descended from an ancient and higher civilization, of which they have retained some memorials.

VACCINATION.

Vaccination returns.

Vaccination is not compulsory in New South Wales, and is resorted to only in times of scare, when an epidemic of small-pox is thought imminent. It is easy to discover, from the returns of the Government vaccinators, the years when the community was threatened by the disease, as at such times the number of persons submitting themselves to vaccination largely increased. The number returned does not include those treated by private medical officers, by whom a large number of persons are vaccinated. The following figures show the number of persons vaccinated by Government Medical Officers since the year 1876 :—

Year.	Sydney and Suburbs.	Country.	Total.	Year.	Sydney and Suburbs.	Country.	Total.
1876	1,269	3,276	4,545	1884	630	6,569	7,199
1877	5,308	11,943	17,251	1885	346	1,884	2,230
1878	532	3,038	3,570	1886	452	1,311	1,763
1879	657	4,981	5,638	1887	1,031	2,199	3,230
1880	460	4,699	5,159	1888	1,091	1,095	2,186
1881	8,738	52,501	61,239	1889	728	1,676	2,404
1882	308	1,869	2,249	1890	958	1,239	2,197
1883	296	600	896	1891	531	1,036	1,567

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* *Vide* Kamilaroi and other Australian Languages, by Rev. W. Ridley, M.A.

Age of persons vaccinated.

The number and ages of persons vaccinated by the Government vaccinators during 1891 will be found below:—

District.	Under 1 year.	From 1 to 5 years.	From 5 to 10 years.	10 years and upwards.	Total.
Sydney and suburbs	124	163	110	134	531
Country districts	112	369	405	150	1,036
Total	236	532	515	284	1,567

INSANITY.

The number of insane persons under treatment in hospitals is almost a fixed proportion of the total population, viz., 2·82 per thousand. Since 1872 the proportion has varied only 0·08 above, and 0·13 per thousand below, the average stated. The hospitals for insane, under the immediate control of the Government, are six in number—five for ordinary insane, and one, at Parramatta, for criminals. Besides these there are two licensed houses each for a single patient, at Picton, and one at Cook's River, near Sydney, containing 101 inmates.

Number of insane under treatment.

The number of insane persons under treatment on the 31st December, 1891, under official cognizance, was 3,134, distributed as follows:—

Name of Hospital.	No. on Register.		
	Males.	Females.	Total.
Gladesville	510	306	816
Parramatta, free......	592	354	946
Do. criminal..................	44	9	53
Rydalmere	152	......	152
Callan Park.........	464	346	810
Newcastle	138	116	254
Cook's River	12	89	101
Licensed Houses, Picton	......	2	2
Total	1,912	1,222	3,134

These figures are 32 in excess of the total for 1890.

Proportion of insane a constant quantity.

The proportion of insane to the whole population, as already pointed out, is almost a constant quantity; this will be seen from the accompanying table, giving the number of persons in hospitals for insane at the close of each year from 1872 to 1891:—

Year ended 31 December.	No. of Insane.	Proportion of Insane to population per 1,000.	Year ended 31 December.	No. of Insane.	Proportion of Insane to population per 1,000.
1872	1,440	2·69	1883	2,403	2·87
1873	1,526	2·75	1884	2,524	2·86
1874	1,588	2·76	1885	2,643	2·85
1875	1,697	2·85	1886	2,717	2·80
1876	1,743	2·83	1887	2,821	2·81
1877	1,829	2·84	1888	2,898	2·80
1878	1,916	2·85	1889	2,974	2·79
1879	2,011	2·83	1890	3,102	2·82
1880	2,099	2·83	1891	3,134	2·74
1881	2,218	2·90			
1882	2,307	2·89		Mean...	2·82

Amount of insanity in England.

The amount of insanity in New South Wales and in England, compared with their respective populations, is about the same, though there appears to be a tendency in the latter country for the rate to increase. The greatest proportion of lunacy in these colonies is found in Victoria, and the lowest in Tasmania, South Australia, and Queensland. The following figures show the number of insane persons per thousand of the population in the United Kingdom, and in the Australasian Colonies:—

Country.	Insane persons per 1,000 of population.	Country.	Insane persons per 1,000 of population.
England	2·88	Queensland	3·30
Scotland	2·91	South Australia	3·19
Ireland	3·16	Western Australia	2·91
New South Wales	2·74	Tasmania	2·00
Victoria	3·37	New Zealand	3·34

Death-rate of the insane.

The percentage of deaths of insane persons is comparatively light. The following table has been computed on the basis of the average number of patients resident in hospitals for insane :—

Year.	Percentage of deaths of average number resident.			Year.	Percentage of deaths of average number resident.		
	Male.	Female.	Total.		Male.	Female.	Total.
1882	6·76	5·61	6·32	1888	7·59	6·32	7·11
1883	9·71	4·98	6·64	1889	7·73	6·44	7·24
1884	8·18	6·22	7·43	1890	7·01	5·74	6·52
1885	7·61	4·97	6·59	1891	8·43	5·65	7·40
1886	7·54	6·37	7·08				
1887	6·64	7·03	6·79	Mean ...	7·72	5·93	7·05

Increase of admissions in seasons of depression.

The number of persons admitted to the hospitals has varied a great deal. The effect of the continued commercial depression during late years was experienced in the unusual number of idiotic and imbecile children, as well as demented people, found amongst the admissions, whose relatives would willingly have maintained them in more prosperous times. The number of admissions to the Hospitals for Insane and the proportion to 1,000 of the mean population are shown below :—

Year.	Admissions.	Proportion to population per 1,000.	Year.	Admissions.	Proportion to population per 1,000.
1872	303	0·57	1882	473	0·59
1873	342	0·62	1883	476	0·57
1874	330	0·58	1884	493	0·55
1875	356	0·60	1885	567	0·60
1876	360	0·59	1886	567	0·58
1877	457	0·72	1887	532	0·52
1878	424	0·64	1888	587	0·55
1879	440	0·63	1889	550	0·50
1880	476	0·65	1890	611	0·54
1881	494	0·64	1891	596	0·52
				Mean	0·59

Influx of insane from abroad.

There is no law in force in this Colony to prevent the influx of insane persons; and, as a consequence, the splendid hospitals, which the bounty of the Government has established for the treatment of the insane, have been the means of burdening the community with the care of unfortunate persons belonging to other countries, where the treatment meted out to the insane is less generous or less scientific than in New South Wales. Were it not for this influx of insane from outside its boundaries, the rate for this Colony would be much lower than it is at present. The following figures show the birth-places of patients in the Hospitals for the Insane during the year 1891 :—

Country.	No. of Patients.	Percentage of total.	Country.	No. of Patients.	Percentage of total.
New South Wales	1,238	31·27	France.............	26	0·66
Other British Colonies......	175	4·42	Germany	103	2·60
England	904	22·83	China	84	2·12
Scotland...........	195	4·93	Other Countries and not ascertained	208	5·25
Ireland	1,026	25·92			

In this and the two following tables all the patients received into the hospitals for insane during the whole of the year are enumerated; the number remaining under control on the 31st December is given in a previous table.

Small proportion of insane born in the Colony.

The number of persons under restraint, who are natives of this Colony, is only 31·27 per cent. of the total, whilst the native-born element of the total population is above 64 per cent. Of the British-born patients, England contributes very nearly twice the number that her population in this country would warrant, and Ireland at least thrice the number.

Ages of insane.

The ages of the insane are set forth in the following table, which shows that nearly one-half of the whole number (47 per cent.) are between 30 and 50 years of age. The table deals only with patients in hospitals for insane, and gives the percentage for 1891 at each period of life.

Ages of Insane.	No. of Patients.	Percentage of all ages.
Under 5 years	1	·02
5 to 10	18	·46
10 ,, 15	39	·99
15 ,, 20	98	2·48
20 ,, 30	671	16·95
30 ,, 40	913	23·06

the widowed. The condition as to marriage of patients in hospitals for the insane during 1891 is shown hereunder :—

Condition as to Marriage.	Male.	Female	Total.
Single	1,617	571	2,188
Married	511	635	1,146
Widowed	105	167	272
Unascertained	258	95	353

Intemperance as a cause of insanity.

It is popularly supposed that the principal cause of insanity is intemperance. The experience of this Colony, however, does not bear out this opinion. The amount of insanity directly due to drink, though certainly large, is not so considerable as that due to other causes. As far as the records of the hospitals show, the percentage of persons admitted suffering from insanity traceable to intemperance, is not more than 10·58 per cent. of the total admissions.

Persons insane from drink soon recover.

Persons suffering from mania induced by excess of drink recover comparatively quickly, and at any one time their number in the hospitals for the insane is scarcely more than 5·5 per cent. The most potent cause appears to be hereditary influence. How far this is productive of insanity cannot, however, be exactly determined; for although the Inspector-General of the Insane, a high authority on lunacy, has ascertained that hereditary influence and congenital defect can be credited with only 8·86 per cent. of the total insanity, this percentage gives no idea of the actual amount of hereditary insanity in the Colony. Of the large number of patients the causes of whose insanity is unknown, it is believed that in most instances the insanity is due to hereditary influence, and even in those cases where the primary cause of insanity has been ascertained, there is strong presumption that many of the patients have inherited an insane neurosis.

Insane neurosis.

In the following table will be found the percentages of the various causes of insanity. The calculations are made on the

apparent or assigned causes in the cases of all patients adm
into the asylums for the insane :—

Cause of Insanity.	Percentage of male insanity.	Percentage of female insanity.	Percentage of total insanity.
Moral :—			
Domestic trouble (including loss of relatives and friends)	1·19	6·21	3·25
Adverse circumstances (including business anxiety and pecuniary difficulties)	5·73	1·04	3·81
Mental anxiety and "worry" (not included under above two heads), and overwork	2·39	2·76	2·54
Religious excitement	·95	1·38	1·13
Love affairs (including seduction)	...	1·03	·42
Fright and nervous shock	·48	1·72	·99
Isolation	·24	·69	·42
Nostalgia.............................	·72	...	·42
Physical :—			
Intemperance in drink...........	13·37	6·56	10·58
Do (sexual)	1·19	1·38	1·27
Venereal disease	·95	...	·56
Self-abuse	·95	...	·56
Sunstroke	1·89	·34	1·27
Accident or injury	4·30	1·03	2·96
Pregnancy	...	·34	·14
Parturition and the puerperal state.........................	...	7·93	3·26
Lactation............................	...	2·07	·84
Uterine and ovarian disorders...	...	1·38	·56
Change of life	...	4·14	1·69
Fevers	...	·34	·14
Privation and overwork	·95	·34	·71
Epilepsy	8·83	8·28	8·61
Disease of skull and brain	2·39	·69	1·69
Pachymeningitis	·24	...	·14
Progressive muscular atrophy...	·24	...	·14
Uræmic poisoning	·24	...	·14
Old age	7·41	3·10	5·64
Other bodily diseases and disorders	3·34	5·52	4·23
Excess of opium	·24	·34	·29
Previous attacks	8·36	8·62	8·46
Hereditary influence ascertained..	7·40	10·01	8·46
Congenital defect ascertained......	4·06	5·17	4·51
Other ascertained causes	·95	·69	·85
Unknown	21·00	16·90	19·32

Deaths of insane.

During the year 1891 the deaths of persons afflicted with unacy numbered 233, viz., 167 males and 66 females. The ollowing are the causes of death, and the number who died from ach disease :—

	Males.	Females.	Total.
EREBRAL DISEASES—			
Apoplexy and paralysis	10	2	12
Epilepsy and convulsions	11	6	17
General paralysis	27	2	29
Maniacal and melancholic exhaustion and decay	23	3	26
Inflammation and other diseases of the brain	24	5	29
HORACIC DISEASES—			
Inflamation of the lungs, pleura and bronchi	8	3	11
Pulmonary consumption	11	5	16
Gangrene of lungs	1	1	2
Disease of the heart and bloodvessels ...	6	7	13
BDOMINAL DISEASES—			
Inflammation and ulceration of stomach, intestines, and peritoneum	2	1	3
Dysentery and diarrhœa	5	4	9
Albuminuria	1	......	1
Diseases of liver	2	......	2
Tumor (hydatid of uterus)	......	1	1
NFLUENZA	12	12	24
PITHELIOMA OF NECK	2	......	2
ALIGNANT DISEASE OF TONGUE	1	......	1
ANCER	2	......	2
ENERAL DEBILITY AND OLD AGE	14	14	28
CCIDENT	2	......	2
UICIDE	3	......	3
Total	167	66	233

Lunacy not incompatible with longevity.

Of the above total, 15 males and 11 females were over 70 years f age, so that the malady of lunacy is not incompatible with ongevity. Two males and five females were over 80 years of ge.

Cost of patients.

The average weekly cost during the year 1891, of maintaining insane patients in the hospitals was about 12s. 1¼d. per week, of which the State paid 10s. 5¼d., the balance being made up by contributions from the estates of the patients themselves, or by their friends. The subjoined table shows the average weekly cost per head, and average private contributions from 1882 to 1891 :—

Year.	Cost per head to State.	Contribution per head from private sources.	Total weekly cost per head.
	s. d.	s. d.	s. d.
1882	12 0¼	1 2¼	13 2½
1883	11 5¾	1 0¼	12 6
1884	11 0	1 3¼	12 3¼
1885	11 3½	1 4½	12 8
1886	11 1¾	1 5½	12 7¼
1887	10 6	1 5½	11 11½
1888	10 2	1 6¼	11 8¼
1889	11 3¼	1 6½	12 9¾
1890	10 4¾	1 7	11 11¾
1891	10 5¼	1 8	12 1¼
Average for 10 years	10 11½	1 5	12 4½

Criminal insane.

Criminal lunatics are confined at Parramatta. At the end of last year the total in confinement was 53, of whom 44 were males and 9 females, as compared with 54 twelve months before. During 1891 the admissions numbered 12, there was 1 discharged recovered, 3 died, and 9 were transferred to other hospitals. The offences for which the criminal insane are detained are amongst lackest in the calendar, as will be seen from the following which refers to the number in the institution on the 31st nber, 1891 :—

Crimes committed by the Insane.	Number of insane.		
	Males.	Females.	Total.
r	18	3	21
pt to murder	1	2	3
ughter	1	......	1
	2	......	2
nt assault	1	......	1
ural offence	1	......	1
g and wounding, shooting with intent, &c.	12	1	13
stealing	2	......	2
t and battery	1	......	1
pretences	2	......	2
y and petty thefts	1	1	2
and malicious burning	......	1	1
pting suicide	1	1	2
ly knowing a child under the age of 10 s	1	......	1
Total	44	9	53

PART XXIII.

Food Supply and Cost of Living.

THE soil of New South Wales is capable of producing in abundance most of the things necessary for the sustenance of human life, though the production of some of these necessaries has been almost entirely neglected, while others are obtained in quantities insufficient for the wants of the community. Considering the comparatively high rate of wages which prevails, food of all kinds is fairly cheap; and articles of diet, which in other countries are almost within the category of luxuries, are in New South Wales largely consumed even by the poorest classes.

Cost of foods.

The cost of providing food and beverages, other than intoxicants consumed in the Colony during the year may be set down at £17,228,300. This sum represents the price to the consumer, and covers all charges, except that of cooking and preparing the food for the table. The expenditure on wines, spirits, and beer, amounted to £4,512,200, so that the total expenditure for all foods and beverages, was £21,740,500, equal to £19 0s. 2½d. per inhabitant, or 12½d. daily; excluding intoxicants the yearly expenditure per inhabitant is £15 1s. 3½d., and the average per day 10d. Compared with the cost of food supply in other countries this sum will not appear considerable, especially when allowance is made for the profusion with which flesh meat is consumed and wasted in this Colony. The following figures are taken from the Dictionary of Statistics, and show the annual expenditure per head of the more important European countries and of the United States and Canada :—

Country.	Per Inhabitant.	Country.	Per Inhabitant.
	£ s. d.		£ s. d.
United Kingdom	14 4 9	Norway	9 15 0
France	12 4 5	Denmark	11 14 0
Germany	10 18 5	Holland	10 8 0
Russia	5 19 7	Belgium	12 3 1
Austria	7 17 4	Switzerland	8 11 7
Italy	6 4 10	Roumania	6 10 0
Spain	8 9 0	Servia	6 10 0
Portugal	7 3 0	United States	9 17 7
Sweden	9 18 11	Canada	8 9 0

Retail cost of foods.

The main articles of consumption in the Colony are meat and bread, the retail value of which equals about 42 per cent. of the total expenditure on food. The following is the approximate retail cost of the chief articles which enter into daily consumption :—

	£
Bread	2,781,400
Fresh meat	4,450,300
Vegetables and fruits	2,693,000
Milk, butter, cheese, &c.	2,507,800
Other farm produce	1,059,600
Sugar	1,456,900
Tea, coffee, &c.	758,100
Other foods and non-alcoholic beverages	1,521,200
Total expenditure on food	17,228,300
Wines, beers, and spirituous liquors	4,512,200
Total expenditure on foods and beverages	£21,740,500

Principal articles of diet required per head.

The amount of the principal articles of diet annually required by each member of the community is estimated to be as follows :—

Flour		260·0 lb.
Oatmeal		4·2 ,,
Rice		11·8 ,,
Meat	Beef ... 177 lb. Mutton ... 105 ,, Pork, &c. 9½ ,,	291·5 ,,
Potatoes		206·5 ,,
Sugar		93·5 ,,
Butter		16·7 ,,
Cheese		5·2 ,,
Tea		7·8 ,,
Coffee		11·5 oz.

For the year 1893 the total demand of the Colony for the above classes of food will be approximately :—

Flour		158,700	tons.
Oatmeal		2,300	,,
Rice		6,400	,,
Meat	Beef	96,400	,,
	Mutton	57,200	,,
	Pork and bacon	5,400	,,
Potatoes		112,000	,,
Sugar		50,900	,,
Butter		9,100	,,
Cheese		2,800	,,
Tea		9,519,100	lb.
Coffee		877,000	,,

Deficiency of wheat production.

The production of wheat in the Colony is not yet equal to the demands of the population. Based on the average yearly consumption of 6·5 bushels per head, the demand of 1892, exclusive of seed, would be 7,686,000 bushels, of which about 3,435,000 would be available from the harvest of the Colony. The harvest for 1892–3 promises to be abundant, and it is probable that not more than from 750,000 to 1,000,000 bushels will require to be imported.

Oatmeal and rice.

Oatmeal and rice are the only other articles of cereal produce largely consumed. Rice is not grown in the Colony, and the quantity required is imported either directly or indirectly from China and India. The land adapted for the growth of this plant in New South Wales is not very extensive in area, and is probably put to better use. Oatmeal, though manufactured in the Colony, is also largely imported.

Beef and mutton.

In the matter of meat supply the Colony is almost independent of external assistance. The consumption of fresh meat of all kinds is extremely great, and, though possibly less than in the neighbouring colony of Queensland, it exceeds per head that of any other country. The requirements of the Colony for food alone amounted in 1891 to 301,600 head of cattle, 2,225,000 head of sheep; and, though the supply of cattle sufficient to meet the demand was beyond the resources of the Colony, the number of sheep available for market very largely exceeded even the number given above, and, were it not for the preference of beef to mutton, no stock need have been imported for slaughtering.

Pork and bacon.

The swine slaughtered for food during 1891 numbered 126,497. The quantity of bacon and hams made, according to the returns collected, was 6,009,600 lb., but it is probable that the amount is understated, as numbers of swine are slaughtered for bacon-curing of which no return is received. The quantity of bacon and hams imported for local requirements during 1891 was 1,293,700 lb. The annual consumption per head, of pork and its manufactured products, averages about 9½ lb.

Potatoes.

The amount of potatoes imported for local consumption during 1891 was 51,010 tons, while the quantity available from the fields of the Colony, after allowing for seed, was only 59,463 tons. The net imports amount, therefore, to 46 per cent. of the total consumption; a result due not so much to the inability of the farmers to grow this crop as to the low prices prevailing for some years in the local markets.

Sugar.

The consumption of sugar in the Colony is enormous, averaging about 93·5 lb. per head during each year. The fields of the Colony produced during 1891 about 25,245 tons, or 25,512 tons short of the local demand, the bulk of which was imported from Queensland. As pointed out in the previous pages relating to agriculture, a large part of the Colony is well adapted to the growth of sugar-cane; but the low price which sugar brought some few years ago, when the market was affected by the bounties given by Germany and France, made the industry unprofitable, and the cultivation of cane was, to some extent, neglected. The considerable rise in the price of sugar during 1889 led to an increase of cultivation over that of the previous year, and this was followed by further extensions in 1890 and 1891, but the area under cane could still be increased 60 per cent. before the production of sugar would equal the local demand.

Butter and cheese.

The year 1890 proved very encouraging to the dairy farmers, and the quantity of butter and cheese manufactured was sufficient to meet local wants, and leave a small balance for export. The production of the succeeding season did not, however, equal the demand, as 1,419,400 lb. of butter and 224,397 lb. of cheese were imported for local requirements. The consumption of butter and cheese during 1891 was 19,246,600 lb. and 5,644,200 lb. respectively.

Tea and coffee.

The quantity of the beverages, tea and coffee, consumed is remarkably large, the average of the first-named being 7 lb. 13 oz. per inhabitant, and of the latter 11½ oz. The consumption of tea is universal throughout the colonies, and the four million people in Australasia probably use more of this beverage than the millions who inhabit continental Europe, other than Russia. Though the soil and climate of a part of New South Wales are adapted to the cultivation of tea, no systematic attempt has been made to grow this plant. The coffee berry, especially the Liberian variety, thrives in the north coast district, but it has not yet been cultivated for commercial purposes.

Food consumption in Australasia.

The average quantity of the principal articles of common diet is given herewith for the various Colonies of Australasia. It will be seen that the consumption of wheat varies from 246 lb. in Queensland to 454 lb. in New Zealand, the average consumption being 334 lb. per head. Rice varies greatly in the quantity used, only 7·1 lb. being the consumption of South Australia, as against 25·2 lb. in Western Australia. The use of tea is universal in Australia, the consumption being largest in Western Australia and Queensland—with 10·6lb. and 8·4lb. respectively. Sugar also enters largely into consumption, the average being 106·2 lb. per head in Western Australia and 93·5 lb. in New South Wales. Coffee is not a favourite beverage in Australasia, the consumption being not quite one-ninth that of tea. It is used most largely in Western Australia, where the annual demand amounts to 24·2 oz. The particulars for each Colony are as follows :—

Article.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	New Zealand.	Australasia.
Grain—								
Wheat ....lb.	390	300	246	390	390	362	454	334
Rice ....lb.	11·8	7·1	19·0	12·3	25·2	8·2	8·6	10·7
Oatmeal ......lb.	4·2	6·0	4·3	4·3	4·9	...	...	...
Potatoes ....lb.	206·5	353·0	281	205	99·7	550	461	305
Sugar ....lb.	93·5	90·75	80	96·3	106·2	87·0	86·8	91·2
Tea ....lb.	7·8	7·7	8·4	6·5	10·6	6·7	6·2	7·3
Coffee ....oz.	11·5	17·4	10·4	21·9	24·2	10·2	9·2	13·4
Cheese ....lb.	5·2	2·8	...	...	...	...	...	...
Butter ....lb.	16·7	10·8	...	...	...	...	...	...
Salt ....lb.	43·8	21·0	51·5	10·6	19·4	22·2	33·9	34·2
Meat—								
Beef ....lb.	176·8	155	280	...	...	60	90	...
Mutton ......lb.	104·8	98	90	...	...	150	110	...
Pork & Bacon. lb.	9·5	12	...	...	...	...	...	...

Consumption of Potatoes.

The consumption of potatoes per head in some of the colonies is probably less than the foregoing table shows ; thus in the case of Tasmania the returns show a consumption of 550 lb., and in New Zealand 461 lb. It is probable that potatoes are in some years grown in excess of the local requirements, and the market in New South Wales and other continental Colonies not being sufficient to absorb this excess, it remains unconsumed or is given to live stock and poultry ; under the circumstances it is impossible to determine the quantity actually entering into the food consumption of the population.

Quantity of food indicative of prosperity.

Judged by the standard of food consumed, the population of New South Wales, as well as of all the other colonies of Australasia, must appear remarkably prosperous. Compared with those of other countries, this will most clearly appear from the following table, the particulars given in which, with the exception of those referring to New South Wales, have been taken from Mulhall' Dictionary of Statistics :—

Country.	lb. per Inhabitant.						Tea and Coffee—Ounces.	Daily Energy—Foot tons.
	Grain.	Meat.	Sugar.	Butter and Cheese.	Potatoes.	Salt.		
United Kingdom ...	378	109	75	19	380	40	91	3,739
France	540	77	20	8	570	20	66	3,993
Germany	550	64	18	8	1,020	17	78	4,708
Russia	635	51	11	5	180	19	6	3,532
Austria	460	61	18	7	560	14	28	3,502
Italy...........	400	26	8	4	50	18	20	2,152
Spain	480	71	6	3	20	17	6	2,507
Portugal	500	49	12	3	40	17	18	2,639
Sweden	560	62	22	11	500	28	112	4,012
Norway	440	78	13	14	500	40	144	3,627
Denmark.....	560	64	22	22	410	25	140	4,071
Holland	560	57	35	15	820	20	240	4,635
Belgium	590	65	27	15	1,050	...	142	5,034
Switzerland	440	62	26	11	140	...	110	2,766
Roumania	400	82	4	9	80	...	8	2,414
Servia	400	84	4	9	80	...	8	2,422
United States........	370	150	53	20	170	39	162	3,415
Canada..	400	90	45	22	600	40	72	4,013
New South Wales...	406	291	94	22	207	44	134	5,396

Thermo-dynamic power of foods.

Taking the articles of the foregoing list, with the exception of tea and coffee, and reducing them to a common basis of comparison, it will be found that the amount of thermo-dynamic power, capable of being generated by the food consumed in this Colony is greater than that of any other country mentioned in the table. For purpose of comparison the figures of Dr. Edward Smith, F.R.S., in his well known work on Foods, have been used, and the heat developed has been reduced to the equivalent weight lifted 1 foot high. In estimating the thermo-dynamic effect of food, grain has been reduced to its equivalent in flour, and regard has been paid to the probable nature of the meat consumed. The figures for potatoes are given as they appear in the Dictionary of Statistics, but it is a probable supposition that but a small proportion of the quantity over 400lb. set down for any country is required for human consumption, and the figures relating to some of the countries are therefore excessive. The substances included in this table are largely supplemented both in America and Europe by other foods, but not more so than in these colonies; and in the table just given will probably be found a just view of the comparative quantity and food-value of the articles of consumption in each of the countries mentioned. The comparison will appear much more strongly in favour of these colonies when the average amount of work which each individual in the community is called upon to perform is taken into consideration. In Australasia the proportion of women and children engaged in laborious occupations is far smaller than in Europe and America, and the hours of labour of all persons are also less, so that the amount of food-energy required is reduced in proportion.

Food consumed in excess of requirements.

In Mulhall's Dictionary of Statistics, under the heading of "Diet," is given a measure of the aggregate amount of work performed by persons doing physical and mental labour, and it would appear that the food of an average man, when burnt in the body, should be equal to at least 3,300 foot tons of work daily, that of a woman 2,200, and of a child 1,100 foot tons. For this Colony the average of all persons would be about 2,125 foot tons, whereas, from the table just given, the amount of work which the daily food consumed by each individual in the Colony from the principal foods consumed is equivalent to, is not less than 5,396 foot tons. The quantity of food consumed in New South Wales would therefore appear to be far in excess of the actual requirements of the population, and though the excess may be looked upon as waste, it is none the less evidence of the wealth of the people whose circumstances permit them to indulge in it.

Tobacco.

The following table gives the annual consumption of tobacco in Australasia and the principal countries of the world. The use of tobacco appears to be more prevalent in Queensland and Western Australia than in any of the other colonies, while the least consumption is in Tasmania and South other parts of the world, the average will not appear excessive :—

Country.	lb.	
Australasia—		Aust
New South Wales	2·91	Italy
Victoria	2·30	Spai
Queensland	3·53	Holl
South Australia	2·12	Belg
Western Australia	4·11	Swit
Tasmania	2·20	Swe
New Zealand	2·17	Den
United Kingdom	1·41	Turk
France	2·05	Unit
Germany	3·00	Cana
Russia	1·23	Braz

CONSUMPTION OF I

Quantity of proof alcohol.

The consumption of wines, spirits, been decreasing for some years, as wil operated individually in decreasing the consumption of intoxicants; but the fact of such a decrease cannot be gainsaid, for the direct evidence given above is corroborated by the general decline in the number of arrests.

Spirits consumed.

The volume of spirits consumed in the Colony during 1891 was 34,009 gallons of Colonial, and 1,234,359 gallons of imported spirits, in all 1,268,368 gallons, equal to 1·11 gallons per head—a quantity not much more than three-fourths of the consumption during the year 1880, as will appear from the following table :—

Year.	Quantity Consumed.		Year.	Quantity Consumed.	
	Total.	Per Inhabitant.		Total.	Per Inhabitant.
	Gallons.	Gallons.		Gallons.	Gallons.
1880	1,011,999	1·38	1886	1,172,140	1·20
1881	1,109,274	1·46	1887	1,136,863	1·11
1882	1,164,115	1·46	1888	1,164,975	1·10
1883	1,214,990	1·45	1889	1,159,380	1·05
1884	1,257,201	1·43	1890	1,201,946	1·09
1885	1,219,024	1·30	1891	1,268,368	1·11

Beer consumed

The quantity of Colonial beer which has been consumed can only be given accurately since the excise duty was imposed in 1887, though approximations have been made for the years 1885 and 1886. It will be seen that the consumption per head has declined considerably since the year 1885. From the following statement it will be found that the quantity of beer imported during the year 1891 shows a slight increase over that of the previous year :—

Year.	Colonial.	Imported.	Total.	Per Inhabitant.
	gallons.	gallons.	gallons.	gallons.
1885	11,000,000	1,839,000	12,839,000	13·79
1886	10,000,000	2,075,000	12,075,000	12·32
1887	9,720,000	2,126,000	11,846,000	11·69
1888	9,300,000	2,413,000	11,713,000	11·01
1889	9,515,000	2,514,000	12,029,000	10·89
1890	9,504,000	2,207,000	11,711,000	10·63
1891	10,594,000	2,464,000	13,058,000	11·42

Falling off in consumption of beer.

The amount of beer drunk in 1885 w
gallons, of which 11,000,000 gallons we
representing 85·7 per cent. of the total
quantity had risen to 13,058,000 g
locally made had fallen to 81·2 pe
period the consumption per head had
to 11·42.

The wine entering into consumpti
chiefly the produce of its own vineyar
less than might be expected in a coun
vine culture. The consumption per i
that of Victoria. The quantity of A
consumed during each of the past twe

Year.	Australian.	Foreign.
	gallons.	gallons.
1880	705,992	154,190
1881	579,630	172,846
1882	491,263	186,006
1883	500,308	182,613

expenditure of several European countries. The following table gives the rate per inhabitant and the proportion of income devoted to liquors. The figures should, however, be taken with this qualification, that in several of the countries enumerated, liquors are consumed principally with meals in place of tea or coffee, so largely partaken of in English-speaking countries :—

Countries.	Amount per inhabitant.			Percentage of income.
	£	s.	d.	
United Kingdom	2	18	0	8·2
France	1	19	0	7·7
Germany	1	14	0	9·4
Russia	1	0	0	9·9
Austria	1	13	0	10·5
Italy	1	5	0	10·7
Spain	1	5	0	9·1
Belgium and Holland	2	0	0	8·5
Denmark	2	10	0	11·1
Scandinavia	1	6	0	7·7
United States	1	10	0	4·2
New South Wales	3	18	11	7·2
Victoria	5	5	0	......

As pointed out in the part of this volume relating to crime, the consumption of intoxicants in this Colony is less than in Victoria and Western Australia, and somewhat below the average of Australasia.

Consumption of liquors in Australasia.

The following table shows the consumption for all the colonies during the year 1891. In the case of South Australia and Western Australia, whence no returns relating to breweries are obtainable, the consumption of beer has been assumed to be at the same rate as that of New South Wales. The largest consumption of spirits per inhabitant is in Western Australia, Victoria being second. Wine is used most freely in Western Australia, Victoria, and South Australia, and beer in the Colony of Victoria. The average consumption of alcohol in all the colonies amounts to 2·93 gallons of proof spirit per inhabitant, ranging from 4·15 gallons in Western Australia to 1·74 gallons in New Zealand. The total for Victoria

is 39 per cent. larger than that of Ne
relating to the production of beer in
over-stated, for as no excise duty was
quite possible that the returns furnish
are greatly exaggerated :—

Colony.	Spirits.		Wi
	Total.	Per inhabitant.	Total.
	galls.	galls.	galls.
New South Wales	1,268,368	1·11	961,57
Victoria	1,358,900	1·19	1,969,19
Queensland	465,734	1·16	258,97
South Australia	206,902	0·65	526,41
Western Australia	75,014	1·47	209,81
Tasmania (1890)	92,209	0·64	24,07
New Zealand............	439,829	0·70	108,02
Total and Means	3,906,956	1·02	4,058,08

Taking Australasia as a whole, it

Strength of Australian Wines and Beers.

It is popularly supposed that Australian wines and beers are not heavily charged with spirit as compared with the imported articles; this belief is erroneous. Several descriptions of Australian wines have a natural strength of 30 per cent. of proof spirit, while from analyses recently made it would appear that the strength of these wines offered for sale varies from 24 to 37 per cent. of spirit. On the same authority it was stated that imported beers ranged from 13·88 to 15·42 per cent. in the case of English, and from 9·58 to 11·76 per cent. of proof spirit in Lager, while the local manufacture varied according to the make from 11·21 to 15·12, the average being 13·75 per cent. It is generally understood, however, that since the imposition of excise duties on colonial beer in 1887, the strength of the article has been somewhat reduced, and does not average more than 13 per cent. of proof spirit.

COST OF LIVING.

Income and expenditure.

In the year 1892 an estimate was made of the yearly expenditure of the population of New South Wales, and it was found that it amounted to £53,445,100. The expenditure distributed under various heads, is herewith given, as an indication of the way in which the people of this Colony disburse their income:—

	£
Food and non-alcoholic beverages	17,228,300
Fermented and spirituous liquors	4,512,200
Tobacco	1,414,300
Clothing and drapery	8,391,600
Furniture	805,900
Rent or value of buildings used as dwellings	6,726,700
Locomotion	1,705,600
Fuel and light	1,797,300
Personal attendance and service	1,918,000
Medical attendance, medicine, and nursing	1,427,800
Religion, charities, education (not including State expenditure)	716,400
Art and amusement	995,900
Books, newspapers, &c.	765,400
State services, postage, telegrams, succession dues	743,100
Household expenses not included elsewhere	2,814,600
Miscellaneous expenses	1,482,000
	£53,445,100

The expenditure for the year given
head, or at the rate of 2s. 6¼d. per
may be thus distributed :—

Food ....
Clothing and Drapery ....
Rent ....
Direct Taxes ....
Sundries (including Intoxicants)........

According to Mulhall the expendi
leading countries of Europe and in t
is :—

Country.	Expenditure per head.

will be found that few countries approach New South Wales in the small proportion of income absorbed in providing food for the people. The following table, given on the same authority as the preceding, shows that, while the actual cost of food and beverage is £18 13s. 1d. in this Colony, as against £14 4s. 9d. in Great Britain, the earnings required to pay for this food are not larger proportionately than in the countries which show most favourably in the table. The number of working days in the year is assumed to be 300, allowing for thirteen days' sickness and fifty-two Sundays :—

Cost of food compared with earnings.

Country.	Average annual cost of food and beverage.	Ratio of cost of food to earnings.	Day's earnings equal to annual cost of food.
	£ s. d.	per cent.	days.
United Kingdom	14 4 9	42·2	127
France	12 4 5	44·0	132
Germany	10 18 5	49·1	148
Russia	5 19 7	52·0	156
Austria	7 17 4	50·8	152
Italy	6 4 10	51·2	153
Spain	8 9 0	51·2	154
Portugal	7 3 0	59·1	177
Sweden	9 18 11	45·2	136
Norway	9 15 0	47·6	143
Denmark	11 14 0	36·0	108
Holland	10 8 0	46·0	138
Belgium	12 3 1	43·4	130
Switzerland	8 11 7	45·2	135
United States	9 17 7	25·3	76
Canada	8 9 0	32·5	98
New South Wales	18 13 1	32·7	98

PRICES OF COMMODITIES.

Retail prices of food.

The area of New South Wales is so extensive, and the popula except on the sea-board, so scattered, that the determination any exactness of the average prices of the various commod consumed is a matter of no little difficulty. No attempt has t fore been made to ascertain the average for the Colony, and i following pages the prices refer to the Metropolitan markets al For the earlier years the authority of contemporary newspa has been followed where the official records were obscure or si but since 1836 these records have been available, and have for most part been adopted. The following table exhibits the ave prices of nine commodities during each year since 1820 :—

Year.	Wheat per bushel.		Bread per 2 lb. loaf.	Fresh Beef per lb.	Butter per lb.		Cheese per lb.		Sugar per lb.	Tea per lb.		Potatoes per cwt.		Maize
	s.	d.	d.	d.	s.	d.	s.	d.	d.	s.	d.	s.	d.	s.
1820	8	4	5	5½	2	9	1	1	...	...		7	3	5
1821	10	3	6	5½	2	8	1	2	...	...		7	3	5
1822	8	8	5	5½	2	6	1	3	...	...		5	9	4
1823	5	0	3½	5½	2	2	1	2	...	...		6	1	2
1824	8	9	5	5½	3	0	1	4	...	...		6	10	4
1825	9	5	4½	6	2	2	1	5	...	...		8	4	5
1826	7	6	5½	5½	2	4	0	10	...	...		9	0	4
1827	7	0	4½	6½	2	3	1	1	...	...		8	0	5
1828	10	6	6	5	2	6	1	4	...	...		18	6	9
1829	9	4	7	6	1	10	1	1	...	...		12	6	7
1830	6	0	4½	3½	1	0	0	11	3½	2	6	8	0	3
1831	5	6	4	4½	1	8	0	6	3½	2	6	5	0	3
1832	6	0	5	5	2	3	0	7	3½	2	6	5	0	4
1833	4	4	4	3½	1	5	0	6	3½	2	6	10	0	2
1834	8	9	5	4	1	6	0	6	3½	2	6	14	0	4
1835	8	6	4	3½	1	10	0	5	3½	2	6	10	0	4
1836	10	0	5½	3	1	9	0	8½	3½	2	6	7	0	6
1837	6	9	3	4½	1	9	0	7½	3½	2	6	10	0	4
1838	8	0	5	4½	1	6	0	8½	3½	2	6	10	6	3
1839	17	4	11½	3	2	6	1	1	3½	2	6	11	0	9
1840	10	6	7½	4½	2	0	1	0	3½	2	6	9	6	5
1841	7	0	4½	4½	2	6	0	10	3½	2	6	12	0	2
1842	7	6	5	3½	2	6	1	1½	3½	2	6	14	6	4
1843	4	9	3½	2½	1	9	0	9	3	2	6	10	0	2
1844	3	4	2½	2	1	5	0	4½	2½	1	5	4	6	1
1845	4	0	2½	2½	1	6	0	6	3	1	6	4	6	2
1846	5	0	3½	2¼	1	8	0	6	4	2	3	6	2	4
1847	4	9	3½	2	1	2	0	7	4	2	4	5	6	2
1848	5	0	3½	2	1	1	0	8	3¾	2	0	6	0	1

Year.	Wheat per bushel.		Bread per 2 lb. loaf.	Fresh Beef per lb.	Butter per lb.		Cheese per lb.		Sugar per lb.	Tea per lb.		Potatoes per cwt.		Maize per bushel.	
	s.	d.	d.	d.	s.	d.	s.	d.	d.	s.	d.	s.	d.	s.	d.
1849	4	0	2½	1¾	1	2	0	6¼	3¾	1	9	6	2	3	9
1850	6	3	4½	1¾	1	3	0	7	3½	1	10	7	0	4	1
1851	8	6	5	2¾	1	3	0	7	3½	1	4	6	0	3	7
1852	6	3	4½	3	1	3	0	7	3½	1	4	6	0	3	11
1853	9	3	6½	3½	1	5¼	0	7¼	3½	1	4	13	0	9	3
1854	11	6	7½	4½	2	3	0	9	5	2	6	18	6	10	0
1855	14	0	9	6	2	4	1	3	7	2	5	21	4	8	7
1856	11	3	7½	3½	1	11	1	2	5½	2	2¼	10	0	3	8
1857	7	4	5	3½	2	0	1	0	7½	2	6	14	6	8	2
1858	8	4	6	4	2	0	1	0	7	2	6	15	6	6	5
1859	10	0	6	4	1	10	1	0	5	2	6	8	0	3	5
1860	8	0	6½	4	1	6	1	10	5½	2	3	7	6	2	10
1861	6	6	6½	3	1	8	0	9	5½	2	4	7	3	5	1
1862	7	0	4½	4½	2	3	0	9	4½	2	0	8	0	5	0
1863	6	6	4	4¼	1	6	0	10	4½	2	0	7	0	3	10
1864	7	0	5½	4	1	6	0	8	4½	2	0	5	0	3	11
1865	9	6	7½	3	1	9	0	9	4½	2	0	8	0	3	7
1866	8	4	6½	3	1	3	1	0	4	2	6	6	0	4	1
1867	4	3	3½	2½	1	6	0	7½	4	2	0	7	0	2	5
1868	5	9	4	3½	1	3	0	9	4	2	0	9	0	2	11
1869	4	9	3½	2	1	6	0	6	4	2	0	4	0	3	8
1870	5	0	3½	3½	1	3	0	6	4	2	0	5	0	3	4
1871	5	7	3½	2½	1	3	0	7½	4	2	3	4	0	3	0
1872	5	0	3½	2½	1	0	0	9	4	1	9	5	0	2	2
1873	5	1	4	2½	1	3	0	5	4	1	9	3	6	3	1
1874	6	9	3½	4	1	7	0	6	4	1	9	4	9	4	6
1875	4	7	3	3½	1	3	0	9	4½	1	9	5	6	4	3
1876	5	1	3½	5½	1	3	0	7	4	1	9	4	9	3	1
1877	6	1	4	4½	1	6	0	6	4	2	0	4	9	3	4
1878	6	1	4	4	1	3	0	6	4	1	9	5	10	4	0
1879	5	0	3½	4	0	10½	0	6	3½	1	6	6	0	3	1
1880	4	8	3	3½	0	10	0	7	4	2	0	4	3	2	6
1881	4	1	3½	3½	0	10½	0	6½	3½	2	0	4	0	3	7
1882	5	5	4	4½	1	3	0	8	4	2	0	5	6	5	4
1883	5	2	3½	4	1	4	0	10	4	2	0	6	0	4	0
1884	4	3	3	4½	1	3	0	9	3½	1	6	6	6	5	0
1885	3	10	3	4½	1	9	1	0	3	1	9	5	6	3	11
1886	4	6	3½	4½	1	9	1	1	3½	1	9	6	3	3	9
1887	4	1	3½	4	1	4	0	10½	3½	1	9	5	0	3	11
1888	4	6	3	4	1	7	0	8½	3½	1	6	6	0	3	4
1889	4	9	3½	3	1	4	0	9	3¼	1	6	9	0	3	7
1890	3	10	3½	4	1	0	0	8	3½	1	6	6	0	3	10
1891	4	8	3½	4	1	1	0	9	3¼	2	0	5	0	2	11
1892	4	9	3½	4	1	3	0	8	3	1	6	5	6	3	4

Variation of price in early years.

The most noteworthy feature of the history of prices in the Colony—the great range of some of the commodities during the year—is not disclosed by the foregoing table. This variation is most noticeable during the early years, and amongst articles of

local production, and was the result
tion of the Colony from the markets
discovery of gold, communication by
was at best uncertain, and as late as
made up but once a month. The
communication, amongst other result
prices, so that except in rare instance
excess of the demand, the product
determines the prices of goods req
Exception must, of course, be made
is still liable to a great range in price
year, as will be shown by some exam

Price of wheat.

Wheat has exhibited very great
from year to year, but even within
average for twelve months was in 18
3s. 4d. In 1888 the average was 3s.
was not less than 17s. 4d. In 1828
in 1840 it was also 10s. 6d. In 18
11s. 6d., 14s., and 11s. 3d. for those

13s., 18s. 6d., 21s. 4d., 10s., 14s. 6d., and 15s. 6d. per cwt. With regard to the variation in a single year, the following examples may be cited :—In 1820, from 4s. 6d. to 10s. per cwt. ; in 1825, from 4s. 8d. to 12s. ; in 1829, from 9s. to 26s. ; in 1834, from 9s. to 19s. ; in 1839, from 7s. to 25s. ; in 1854, from 11s. to 24s. ; in 1856, from 3s. to 11s. ; and in 1888, from 2s. to 24s.

Price of maize.

The price of maize has not been subject to the same fluctuations as that of wheat, since, being little used except for horse-feed, this grain is capable of being replaced by other products ; nevertheless the prices have ranged from 1s. 8d. in 1848 to 10s. in 1854.

Price of bread.

In the list given at page 852 are included quotations of bread at per 2 lb. loaf. It will be seen that in most years the price varied somewhat regularly with that of wheat. There are, however, exceptions to this rule, chiefly in the years during which wheat brought an unusually high figure, when the price of bread will be found to have been less than might have been expected. The lowest price at which bread has been retailed was 2½d. in 1849, and the highest was 14d. the 2 lb. loaf, which figure was paid for a short time in 1839.

In addition to the nine commodities which are given in page 852, the following list of the average retail prices of articles largely used may not be without interest. The information begins with 1836, beyond which year it is difficult to determine the exact average :—

Year.	Bacon per lb.	Eggs per doz.	Rice per lb.	Oat-meal per lb.	Coffee per lb.	Salt per lb.	Beer (Col.) per gall.	Soap per lb.	Starch per lb.	Tobacco per lb. (Col.)	Tobacco per lb. (Imp.)
	s. d.	s. d.	d.	s. d.	s. d.	d.	s. d.	d.	s. d.	s. d.	s. d.
1836......	...	2 2	9	...	...	...	...	4½	...	...	3 3
1837......	...	2 6	...	...	1 6	1	1 0	...	...	...	4 0
1838......	...	4 0	...	...	...	...	...	...	...	...	...
1839......	...	3 0	...	...	1 6	...	...	4½	...	...	3 3
1840......	0 10	2 9	...	...	1 4	...	...	4½	...	...	3 3
1841......	0 11	2 3	...	...	1 4	..	...	4½	...	...	3 3
1842.. ...	0 10½	1 11	2	...	1 4	1	1 9	4½	...	...	3 6
1843......	0 10	2 0	1½	...	0 10	0½	2 3	...	...	1 4	3 6
1844.....	0 5½	0 11	1¾	...	0 8½	1¼	1 3	3¾	...	1 6	3 6
1845......	0 6½	1 1	3	...	0 7½	1½	1 1	3½	...	1 6	4 6

Year.	Bacon per lb.		Eggs per doz.		Rice per lb.	Oat-meal per lb.	Coffee per lb.		Salt per lb.
	s.	d.	s.	d.	d.	d.	s.	d.	d
1846	0	9½	1	3	1½	...	0	10	1
1847......	0	6½	1	1	3¾	6	1	1	1
1848... ..	0	9	1	3	3½	6	1	1	1
1849......	0	8½	1	1	3¾	5¾	1	0	1
1850......	0	8½	1	4	4	6	1	2	1
1851......	0	9½	1	8	4	6	1	3	1
1852......	1	1	1	6	4	6	1	3	1
1853......	1	2½	2	3	4¼	6	1	3	1
1854......	1	4½	2	9	5	7½	1	6	2
1855......	0	11½	2	8	6	9	1	8	4
1856......	0	10	2	2	5¼	7	1	7¼	3
1857......	0	9½	1	11	5	7	1	8	2
1858......	0	7½	2	3	6	7	1	8	4
1859......	0	8½	1	10	4¼	7	1	8	2
1860......	1	0	1	3	5	6	1	6	2
1861......	0	10	1	6	4	6	1	6	2
1862......	0	10	1	5	3	5	1	5	1
1863.....	0	10½	1	7	3	4	1	4	1
1864......	0	10	1	6	3	4	1	4	1
1865......	0	9¾	1	6	3	4	1	4	1
1866......	1	0	1	6	4	4	1	4	1
1867......	0	10	1	7	3½	4	1	4	1
1868......	0	9½	1	2	4	4	1	4	1
1869... ..	0	10	1	3	3	4	1	0	1
1870......	0	10½	1	4	3	4	1	2	1
1871......	0	9½	1	4	2½	2½	1	0	0
1872......	0	9	1	1	3	3	1	1	0
1873......	0	9	1	4	2½	2¾	1	2	0

figures will be found to represent the fair average rates, having regard to the class of goods consumed. It is of importance to take into consideration the quality of the produce consumed, for very considerable changes, in the direction of improvement, have taken place in this respect. Thus, the ordinary sugar now used, and obtainable for about 3d. per lb., is a good white sugar, whereas some years ago only the commonest quality of moist sugar was found on the tables of the people. A very material improvement has been effected in the quality of flour, a large proportion of the present consumption being roller-made. Salt-butter still forms the bulk of the supply, but it is usually of recent make; while formerly the butter was imported from Great Britain, and was several months old before reaching the dining table. The candles now used are made of stearine, but the time is not remote when only the common tallow candle was in general use; and so with many other articles of ordinary consumption. The retail prices are those actually paid from day to day, irrespective of the nominal wholesale rates of the commodities in the Sydney markets.

Improved quality of commodities.

A consideration of retail prices would not be complete without a statement of the price-level in different years. This can be given for foods; but at present the data are hardly sufficient to establish an exact series of price-levels, taking into consideration all the elements of ordinary expenditure. The information in regard to foods is given below, the assumption being made that the quantities entering into consumption were the same formerly as at the present day. This assumption, however, is in some respects erroneous; but there appears to be no other means within reach to effect a juster comparison. Sugar, tea, coffee, butter, cheese, and potatoes, are now more largely used than (say) prior to 1870; but bread, or other forms in which flour is used, and meat, are not consumed so largely. However, when full allowance is made on this score, the following table will still be found to approximate closely to the truth. The price-level is

Price-level of commodities.

calculated on the prices ruling for
sugar, tea, and potatoes :—

Five-year period.	Price-Level Period 1830-4
1830-4	1,000
1835-9	1,116
1840-4	992
1845-9	655
1850-4	962
1855-9	1,273
1860-4	1,053
1865-9	900
1870-4	780
1875-9	919
1880-4	867
1885-89	866
1890-92	768

Range of Prices. During the period of sixty-two yea
there has been a range from 655 or
1,657 for 1855-9, equal to over 9
last period of the series with the
only two are marked with lower

13s. 4d. per week, or 2s. 8d. per room. Dwellings of more than five rooms are not often occupied by labouring-class families, unless there are grown-up sons and daughters who contribute to the family earnings. In the suburbs of Sydney houses of the kind referred to bring somewhat lower rents, the ratio varying between 2s. 4d. and 2s. 8d. per room, while in the provincial towns, except in exceptional cases, rents are still lower, varying from 2s. to 2s. 6d. per room.

Cost of house rent.

Speaking generally, the deduction from a labourer's income for rent amounts to 25 per cent., which, from whatever point it is viewed, must be regarded as excessive. Two circumstances have conjoined to make the rents in the metropolis high—perhaps higher when all things are considered than obtains in any of the other metropolitan cities of Australasia—the price of land, and the rate of interest expected by property holders. As regards the former there can hardly be any question that land in and about Sydney has been maintained at a fictitious value for many years, and recent events have shown that much more reasonable prices for unimproved lands will obtain in the future. The interest expected by property holders has been until recently from 7 to 10 per cent., free from outgoings. During the years 1891 and 1892 a decided fall took place, and a much lower return from house property is now readily accepted.

WHOLESALE PRICES.

Wholesale prices.

The average wholesale prices of the principal kinds of milling produce, feed grains, root crops, and fodder for each month of the year 1891 are given in the following statements, together with the mean prices for both 1891 and 1892. The average for the whole year is given irrespective of the quantities sold in each month. In using the table it would be well if this qualification were borne in mind, as the apparent average obtained by dividing the sum of the prices of each month by twelve may, and in some instances does, differ from the true average obtained by taking into account the total sold at each price.

Average Wholesale Current Prices of Milling Produce and Feed Grains.

Month, 1891.	Milling Produce.								Feed Grains.		
	Wheat.		Flour.								
				Australian.							
	New Zealand.	Australian.	New Zealand.	Roller.	Stone.	Oatmeal.	Bran.	Pollard.	Barley.	Oats.	Maize.
	Per bushel.	Per bushel.	Per ton.	Per ton.	Per ton.	Per ton.	Per bushel.	Per bushel.	Per bushel.	Per bushel.	Per bushel.
	s. d.	s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	d.	d.	s. d.	s. d.	s. d.
January	*	3 9	£10 10s.	12 15 0	11 10 0	11 0 0	10¼	9¾	3 0	2 4	4 1½
February	*	3 7½		9 10 0	9 0 0	11 0 0	7	8¼	2 9	1 10	3 7½
March	*	3 10		9 11 6	8 18 6	11 0 0	9	9	2 7	1 10½	3 1½
April	*	3 7		10 17 6	10 17 6	11 7 6	10	9¾	2 6	1 10½	2 8½
May	4 8	3 9		11 7 6	10 15 0	11 10 0	10½	10¼	2 6	1 10½	2 4½
June	4 8	4 3		11 10 0	10 5 0	11 5 0	9½	9¾	2 6	1 10½	2 3
July	4 9	4 6		11 15 0	10 10 0	11 0 0	9½	9½	2 7	1 10	2 3½
August	4 7	4 9		11 15 0	10 8 6	11 15 0	9¾	9½	2 9	1 10½	2 2
September	4 7	4 9		12 15 0	11 6 6	10 10 0	9¾	9½	2 6	1 10½	2 1½
October	4 7	4 6		12 15 0	11 10 0	10 10 0	10¾	9¼	2 6	1 10½	2 2½
November	4 7	4 9		12 15 0	11 10 0	12 0 0	9¾	9¼	2 8	1 10½	2 2½
December	4 7	5 1		12 13 6	11 10 0	12 0 0	11¼	10¼	2 8	1 4½	2 4½
Mean Prices, 1891	.....	4 3	10 10 0	11 12 6	10 12 6	11 5 0	9¾	9½	2 7	1 10½	2 7½
Mean Prices, 1892	......	4 8	......	11 10 0	10 15 0	12 7 6	11½	11	3 2	2 7	3 1

Average Wholesale Current Prices of Farm Produce.

Month, 1891.	Root Crops.						Fodder.					
	Potatoes.			Onions.	Turnips.	Carrots.	Hay.		Straw.	Oaten Chaff.		Straw Chaff.
	New Zealand.	Tasmania.	New South Wales.				Oaten or Wheaten.	Lucerne.		Prime.	Medium.	
	Per ton.	Per ton.	Per ton.	Per ton.	Dozen bunches.	Dozen bunches.	Per ton.	Per ton.	Per ton.	Per ton.	Per ton.	Per ton.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	s. d.	s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
January	*	*	5 7 6	6 2 6	2 0	1 3	5 10 0	2 17 6	2 2 6	4 17 6	3 5 0	2 15 0
February	*	*	4 2 6	5 5 0	2 3	1 3	5 5 0	3 0 0	2 2 6	4 12 6	3 10 0	2 15 0
March	3 10 0	3 15 0	*	3 16 6	2 0	1 3	5 7 6	3 7 6	2 7 6	4 7 6	3 0 0	2 5 0
April	2 12 6	3 5 0	*	3 15 0	1 3	1 3	5 5 0	3 7 6	2 7 6	4 7 6	3 5 0	2 5 0
May	2 0 0	2 15 0	*	3 17 6	1 1	1 1	4 5 0	3 7 6	2 7 6	4 7 6	3 5 0	2 15 0
June	2 2 6	3 0 0	*	4 6 6	1 1	1 1	4 5 0	3 7 6	2 5 0	3 15 0	3 5 0	2 10 0
July	1 17 6	2 10 0	*	4 2 6	1 1	1 1	4 5 0	2 17 6	2 5 0	4 0 0	3 15 0	2 15 0
August	1 15 0	2 7 6	*	4 2 6	1 1	1 1	4 2 6	2 15 0	2 5 0	4 15 0	3 10 0	2 15 0
September	1 7 6	2 15 0	*	4 7 6	1 1	1 1	4 5 0	2 15 0	2 5 0	4 0 0	3 5 0	2 5 0
October	2 0 0	3 0 0	*	4 15 0	1 1	1 1	4 5 0	3 12 6	2 5 0	4 0 0	3 5 0	2 10 0
November	0 15 0	1 10 0	4 0 0	5 2 6	1 3	1 3	4 2 6	2 10 0	2 7 6	4 0 0	3 0 0	2 10 0
December	*	*	4 5 0	4 10 0	1 3	1 3	5 10 0	2 7 6	2 12 6	4 15 0	3 0 0	2 10 0
Mean Prices, 1891	2 0 0	2 15 3	3 13 6	4 10 0	1 4	1 2	4 15 0	3 0 0	2 5 0	4 5 0	3 5 0	2 10 0
Mean Prices, 1892	2 15 0	3 17 6	...	4 2 6	1 3½	1 0¾	4 5 0	3 0 0	2 10 0	4 10 0	3 10 0	3 5 0

* No quotations.

Average Wholesale Current Prices, Farm-yard and Dairy Produce.

Month, 1891.	Butter.		Cheese.	Bacon.		Lard.		Eggs.	Poultry.								Bee Produce.		Pigs.		Milk.	
	Dairy.	Factory.		New Zealand.	New South Wales.	Bladder.	Bulk.		Fowls.		Ducks.		Geese.		Turkeys.		Honey.	Wax.	Porkers.	Bacon.		
	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per doz.	Per pair.		Per pair.		Per pair.		Per pair.		Per lb.	Per lb.	Per lb.	Per lb.	Per gallon.	
	d.	d.	d.	d.	d.	d.	d.	d.	s.	d.	s.	d.	s.	d.	s.	d.	d.	d.	d.	d.	s.	d.
January	5½	7½	4	9	6¼	4½	2½	21	2	9	3	6	4	6	8	6	4½	10	3	2½	0	11¼
February	5¾	8¼	4	9	7	4	2	20	3	9	3	6	5	6	9	0	4½	10	3	2¾	1	0
March	4½	6¾	4	9	7½	4	2	18	3	0	3	6	5	6	8	6	4	11	3¼	3	1	0
April	5¾	8½	4	8½	6¾	4	2	19	2	9	3	6	4	6	7	6	4	11	3¾	3	1	0
May	10	13	5½	8	6¾	4½	2½	21	3	0	3	9	4	6	7	6	4	10½	3	3	1	0
June	11½	13½	6	8	7¼	4½	2½	24	2	9	3	9	4	6	7	6	4	10½	3¼	3¼	1	0
July	20	22½	7	8	6¾	4½	2½	13	2	9	3	9	5	0	8	6	4	10½	3¼	3¼	1	2
August	13	15½	6	8	6¾	5	2½	11	3	0	3	6	5	0	8	0	4	11	3½	3	1	2
September	10½	13	6	8	6½	5	2½	9	3	0	3	6	5	6	8	0	4	11	3	3¼	1	1½
October	8	9	6½	8	6	5	2½	9	3	0	3	6	6	0	8	6	4	10½	3½	3¼	0	11
November	7½	9	6½	8	6	4½	2½	12	3	3	4	0	6	6	8	6	4	10½	4	3	0	10
December	7½	8½	5	8½	6¼	5	2½	10	3	6	4	0	7	0	9	6	4	10½	4	3	0	10
* Mean Prices, 1891.	9	11	5½	8½	6¾	4½	2½	15½	3	0	3	6	5	6	8	6	4	10½	3¾	3	1	0
Mean Prices, 1892.	11¼	13	4	8	6	5¾	4	13	3	2	3	4	5	4	7	8	3¾	10¼	4	2¾	0	11½

Cereals, &c.

Milling produce, feed grains, and fodder, were on the whole remarkably steady in price during the year 1891. Locally grown wheat ranged from 3s. 7½d. per bushel in February, when the new crop was already harvested, or ripe for gathering, to 5s. 1d. at the close of the year, the difference representing the various items of risk, interest, and shrinkage in volume. Quotations are given for New Zealand, as well as locally made flour. This is necessary, as, owing to the annual shortage of the New South Wales wheat crop, a large importation of breadstuffs is necessary, and New Zealand furnishes a market whence supplies may be readily drawn. Barley and oats are for the most part imported, and the prices of those cereals during the year call for little notice. Maize, on the contrary, is almost wholly of local growth, and its price averaged 2s. 7½d. per bushel. The general steadiness in prices noted above also extended to the various forms of fodder, most of the defect below the average which is observable in some months is due to want of quality in the commodity offered. Root crops, on the other hand, show very great range. Thus, potatoes varied between £1 7s. 6d. per ton and £5 7s. 6d., while onions sold for £3 15s. in April, as against £6 2s. 6d. per ton in January. No quotations are given in some of the columns of the foregoing tables; in the months in which these omissions occur no produce was offered, or a quantity insufficient to merit a quotation.

Farm and Dairy Produce.

The wholesale prices of farm-yard and dairy produce in the Sydney markets are shown in the preceding table. The figures call for little comment beyond the caution already given in regard to the prices of commodities generally—that the averages are irrespective of the quantities sold. As regards most of the articles in the list, the lower the price the larger the consumption. The exception to this rule is poultry, which is most in demand before the Christmas season, when prices are correspondingly high. A comparison of the average wholesale prices ruling for these commodities for the last ten years is given in the following figures:—

rm Produce, 1883–1892.

	Root Crops.		Fodder.					
			Hay.		Straw.	Chaff.		
ze.	Potatoes.	Onions.	Oaten or Wheaten.	Lucerne.		Oaten.		Straw.
						Prime.	Medium.	
el.	Per ton.	Per ton.	Per ton.	Per ton.	Per ton.	Per ton.	Per ton.	Per ton.
d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
9	4 0 0	5 15 0	5 0 0	3 7 6	3 10 0	5 15 0	4 15 0	3 15 0
9	5 5 0	10 10 0	4 10 0	4 15 0	2 15 0	4 10 0	3 0 0	*
8	3 17 6	5 0 0	4 5 0	4 0 0	2 15 0	4 7 6	*	3 2 6

Average for Farm-yard and Dairy Produce, 1883–1892.

Year.	Butter.	Cheese.	Bacon.	Eggs.	Poultry.				Bee Produce.	
					Fowls.	Ducks.	Geese.	Turkeys	Honey.	Wax.
	Per lb.	Per lb.	Per lb.	Per doz.	Per pair.	Per pair.	Per pair.	Per pair.	Per lb.	Per lb.
	s. d.	d.	d.	s. d.	s. d.	s. d.	s. d.	s. d.	d.	d.
1883	1 0½	6½	9	1 8	4 9	6 6	8 6	13 0	4¾	9¼
1884	1 1	6½	9	1 8	4 0	5 0	8 0	12 6	4½	10½
1885	1 6	8	8¼	1 7	4 1½	4 6	8 3	11 2	4½	10½
1886	1 6	8½	7½	1 6	3 10	4 2	7 4½	9 8½	4¼	10½
1887	1 1	7	7	1 4	3 6	4 1	7 0	9 5	3¾	10¼
1888	1 3½	6½	7½	1 4	3 3	3 8	6 6	9 9	3¼	10½
1889	1 1	6	7½	1 5	4 0	4 2	6 8	9 6	2¾	10¼
1890	0 9½	4	7½	1 3¼	3 2¼	3 6½	6 0¾	9 4¾	3¾	10
1891	0 10	5½	7½	1 3½	3 0	3 6	5 6	8 6	4	10½
1892	1 0	4	7	1 1	3 2	3 4	5 4	7 8	3¾	10¼

Pastoral and Raw Produce.

The prices of the items set forth in the tables here given are determined by the local, or at all events the Australasian, demand, wheat, of course, being an exception, its price being fixed by that ruling in the markets of the world. The prices of pastoral and other raw produce, which form so large a proportion of the exports of the Colony, are not sensibly affected by local consumption. No object is to be gained by showing the monthly variations, so that in the statement only the average for the year is given. The following figures show the average wholesale current prices of Pastoral Produce, &c., for year 1892 :—

Commodity.		Price.
Beef	per 100 lb.	12s. 6d.
Mutton	per lb.	1¼d.
Pork	,,	4d.
Wool—		
Merino, washed	,,	10d. to 11½d.
,, scoured	,,	13d. ,, 16d.
,, greasy	,,	7d. ,, 10d.
Crossbred, greasy	,,	7½d. ,, 8½d.
Skirtings, scoured	,,	9d. ,, 11½d.
,, greasy	,,	5d. ,, 8d.
Sheepskins—		
Full wool	,,	5d.
Medium	,,	4d.
Short	,,	3d.
Pelts	,,	2d.

Commodity.		Price.
Hides—		
Cattle, heavy	per lb.	2¾d.
,, medium	,,	2d.
,, Others	,,	1½d.
Horse	each	30d. to 65
Leather skins—		
Calves	,,	3d. to 24
Kangaroo, extra large	per doz.	70s. to 14
,, other	,,	16s. to 10
Fur skins—		s.
Opossum	,,	1 to 2
Platypus	,,	1 to 3
Bear	,,	1 to
Hair—		d.
Horse, mane	per lb.	6 to 1
,, tail	,,	10 to 1
Ox, clean tail	,,	8 to 1
,, stumps	,,	2½ to
		s.
Bones	per ton	40 to 11
Horns	per 100	2 to 3
Hoofs	per ton	30 to 5
Tallow—		
Mutton	,,	£21 to £22
Mixed	,,	£20 to £21
Beef	,,	£19 15s. to £
Wattle bark—		
Good		

gold. It is considered that this system enables a truer estimate of the relative prices to be obtained than that of selecting the prices of certain articles without giving due weight to the quantities of such articles exported :—

Year.	Price-level.		Year.	Price-level.	
	1870 prices = 1,000.	1891 prices = 1,000.		1870 prices = 1,000.	1891 prices = 1,000.
1870	1,000	1,312	1881	1,020	1,339
1871	1,223	1,605	1882	1,045	1,371
1872	1,114	1,462	1883	1,053	1,381
1873	1,180	1,549	1884	1,041	1,368
1874	1,183	1,553	1885	916	1,202
1875	1,167	1,532	1886	877	1,151
1876	1,105	1,451	1887	899	1,179
1877	1,013	1,329	1888	865	1,135
1878	1,009	1,325	1889	868	1,139
1879	1,048	1,375	1890	846	1,110
1880	1,028	1,349	1891	762	1,000

The years comprised in the foregoing table divide themselves into three periods—from 1870 to 1876, the average level of prices, if 1891 prices be taken as 1,000, was 1,509; in 1877 prices fell, and for the next 8 years averaged about 1,354; in 1885 prices again experienced a heavy fall, and have since remained at a low level—the figures for the past year being actually the lowest touched during at least twenty-two years.

Increase in purchasing power of money.

From the foregoing table it will be seen that the purchasing power of money has steadily increased since 1874, if the Customs values of the exports fairly represent the prices ruling in the general community, whether in the Colony or elsewhere, and that twenty shillings in 1891 would purchase the same articles of domestic export which in 1874 would have cost thirty-one shillings.

Chief articles of Export.

The chief articles of domestic export are wool, coal, shale, live-stock, tin, silver, silver-lead and ore, copper, skins, tallow, and leather. Other articles have also been exported to considerable value in times past, but their importance has disappeared, or is lost in comparison with that of the products just named.

Prices of Wool and Coal.

Wool and coal have contributed to much of the wealth Colony, and the fluctuation in their prices has had a very r effect on the condition of trade; the price-level of these cor ties has been computed for the period which is covered general table just given. It will be seen that the fluctuati the value of both wool and coal have been more marke those in the value of the general exports, but the same te to fall is clearly enough discernable :—

	Wool.			Coal.		
Year.	Actual value.	At 1891 prices.	Price-level. 1891 Price =1000.	Actual value.	At 1891 prices.	Pri 18
	£	£		£	£	
1870	2,741,141	1,577,508	1,738	267,681	300,569	
1871	4,748,160	2,181,729	2,176	256,690	291,591	
1872	3,342,900	1,670,363	2,001	307,861	345,060	
1873	4,248,259	2,108,009	2,015	526,089	398,677	
1874	5,010,125	2,499,118	2,004	632,247	450,196	
1875	5,651,643	2,910,690	1,941	671,483	478,057	
1876	5,565,173	3,349,684	1,661	625,211	448,049	
1877	5,256,038	3,396,700	1,547	648,977	472,240	
1878	5,723,316	3,718,671	1,539	708,406	519,011	
1879	6,491,198	4,113,620	1,577	694,707	514,694	
1880	8,040,625	5,149,798	1,561	425,299	388,505	
1881	7,149,787	4,642,029	1,540	417,530	531,090	
1882	7,433,091	4,862,147	1,528	647,033	650,579	
1883	9,598,761	6,256,753	1,534	829,662	779,968	
1884	8,953,100	5,705,392	1,547	931,045	871,926	
1885	7,246,642	5,591,379	1,296	966,663	905,752	
1886	7,028,596	5,785,370	1,214	947,002	895,185	
1887	8,911,155	7,197,407	1,238	960,539	923,331	
1888	9,089,776	7,842,446	1,159	1,064,472	992,141	
1889	10,620,636	8,707,152	1,219	1,279,271	1,231,338	
1890	8,991,396	7,858,207	1,143	987,173	939,540	
1891	11,036,018	11,036,018	1,000	1,306,630	1,306,630	

Owing to the low price obtained for their coal in 1872, th collieries in the northern district formed an associatio raised the price to a fixed rate, which was maintained for s years. This advance permitted several new collieries t established, entering into competition with the older establish and in consequence the general price declined, till in 1 became so low as to cause several of the mines to cease oper

PRICE LEVEL

PRICES OF 1891 = 1000

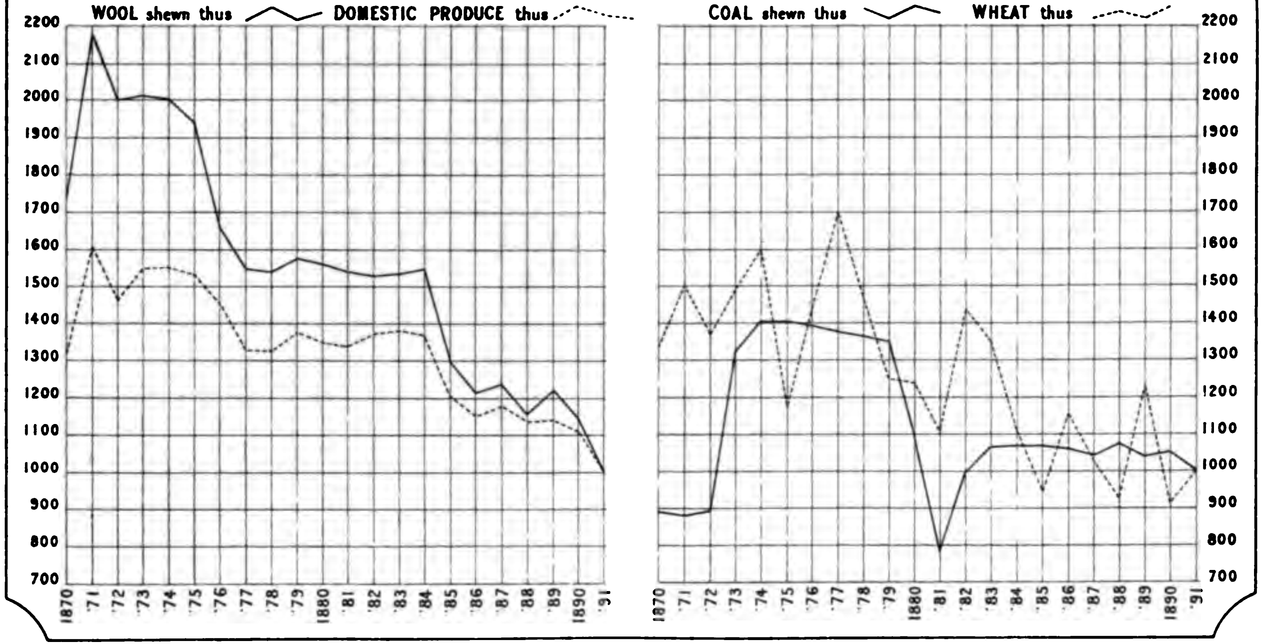

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PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE.
SYDNEY, NEW SOUTH WALES

pending an improvement in price. The association was partly disbanded in 1881, but it has been proposed to revive it, though as yet nothing definite has been settled. This will serve to explain the great fall shown in the 1870-1-2 price levels. The prices in years subsequent to the lastmentioned somewhat improved through an increased demand in foreign markets.

Price-level of imports.

It is impossible under the present circumstances to establish a general price level for the imports of the Colony, but a fairly accurate return can be obtained by accepting the values and quantities of the British domestic exports of those articles which are chiefly imported into the Colony. This has been done in the compilation of the following table for the ten years ending 1891. It will be seen that the import prices during the period covered have not declined as a whole in so great a ratio as those of the exports, and if the period between 1886 and 1890 be considered, hardly any change has taken place. Between 1884 and 1886 the largest decline is observable, which period was coincident with a similar change in the price level of the exports. The figures of 1891 show a slight advance over those of the previous year, which is largely due to the better prices obtained for cotton goods. The advance in the prices was small, but the articles under this heading form no inconsiderable portion of the British domestic export. The values, like the quantities operated upon, are in accordance with the British trade returns, but these can be accepted in lieu of the prices ruling in the local market, as whichever are adopted, the relation between the general totals is still maintained. The price-level of import during the last ten years was :—

Year.	Price level 1891 price = 1,000.	Year.	Price level 1891 price = 1,000.
1882	1,138	1887	978
1883	1,101	1888	978
1884	1,077	1889	989
1885	1,027	1890	989
1886	982	1891	1,000

PART XXIV.

Industrial Progress.

Periods of industrial history.

THE industrial history of the colony is naturally di
eight periods, each with some distinguishing char
the first extending from the beginning of settlement und
Phillip in 1788 to the close of Governor Macquarie's ter
in 1821, at a time when the colony had begun to feel
effects following the discovery of the passage across
Mountains. The second, from 1821 to 1838, when the
assigning convicts to free settlers came to an end.
from 1838 to 1843, when the progress of the country was
by a commercial crisis rendered memorable by the failu
Bank of Australia. The fourth, from 1843 to 1851, a
very great depression, summarily terminated by the di
gold. The fifth, from 1851 to 1861, an era of rapid gr
great change, ushered in with the intense excitement of
for gold and ending with the introduction of the new
land sales by free selection before survey. The sixth, fro
1872, a time of transition and recovery from the fever of
era, when the golden dreams of the fifties had faded awa
social and industrial system now existing was evolved o
heterogeneous elements brought together during the
period. The seventh, from 1872 to 1886, during which
revenue was increased by lavish sales of the public
large sums of borrowed money were expended on publ
The eighth began with the year 1886 and is still in
There are everywhere signs of industrial unrest, and of
mination on the part of the labouring classes to take a la
in governing the country, and the near future may br

important changes in the laws relating to labour. A satisfactory feature of the times is the recognition by both employers and workmen of the ruinous consequences of strikes; on all sides there seems to be a disposition, when an industrial dispute arises, to accept any settlement short of a sacrifice of vital principles. This is the dearly bought lesson of the great strikes of 1888 and 1890. An Act was passed by the Legislature of New South Wales, and assented to on the 31st March, 1892, which provides for the establishment of Councils of Conciliation and of Arbitration for the settlement of industrial disputes. This Act is now being brought into operation; a President has been appointed, and a Clerk of Awards, and attempts have been made to bring under the notice of both employers and employed the advantages to be derived by them from a resort to the provisions of the measure in case of the occurrence of any industrial dispute.

The first period.

A reference to the industrial condition of the first period is desirable as an historical record; but otherwise it has little bearing upon the industrial developments of to-day, which are in no sense the outcome of conditions existing prior to 1838. Lieutenant-Colonel Collins in his "Account of the English Colony in New South Wales," gives the best and most authentic history of the earlier days and details minutely the events which occurred during the thirteen years of his residence in the colony. At first provisions for the support of the colonists were necessarily imported, and as no strenuous efforts were made to obtain supplies from the soil of the country the people long continued to be dependent upon importations from abroad, and some times suffered great privations from scarcity. In 1792, when retail shops were first open for the sale of goods, wages were fixed by Government regulations, as also was the price of bread. Very little wheaten bread was used, flour being sold at the prohibitive price of 9d. per lb. In the statement of prices during 1792, and the two following years, articles of luxury as well as necessity are quoted, but as labourers were paid only 3s. a day the quantity of luxuries sold

by the open stores was probably very
some of the retail prices :—

Maize	per lb.,	3d.
Rice	,,	3d.
Flour	,,	9d.
Cheese	per lb.,	1s. 6d. to 2s.
Potatoes	per lb.,	3d.
Salt pork	per lb.,	6d. to 8d.
Salt beef	per lb.,	4d.

Payments for work were made " by
by the Government, agricultural la
clearing and hoeing for corn 1 acre o
for sawing 100 feet, 7s. ; for splittin
1796 the sum paid for making a pai
6s., a gown 5s. ; carpenters received
day without rations, and these
During the first five years 1,703 ac
were brought under cultivation—fo
24, and 1,086 for maize. In 1800 th
to 4,665 acres, and the live stock had
In 1803, with a population of ove
provisions were :—

condition, abounding in all the necessaries and comforts of life. Wheat was selling at 7s. 6d. a bushel, maize 4s., potatoes 5s. 6d. cwt., fowls 3s. a couple, fresh beef, mutton, and pork, 5d. lb. Of wheat 18,174 acres were grown, with 9,276 acres of maize, and 3,215 of potatoes, and the production of wool amounted to 415 bales. Coin was scarce; the currency mainly consisted of Government paper, Spanish dollars, and copper, the system of barter necessarily prevailing to a very considerable extent. By the term "flourishing condition" Captain Wallis probably meant that the Australian colonist was better off than the British or Irish agriculturist, whose condition at the beginning of the century was not an enviable one.

The second period.

In the earlier portion of Sir Thomas Brisbane's government the rate of increase of the population was accelerated by the introduction of greater numbers of free immigrants, a considerable proportion of whom were artisans, whose wages in 1823-4 were from 5s. to 7s. a day, the trades most in request being carpenters, stonemasons, bricklayers, blacksmiths, sawyers, coopers, and shoemakers. Provisions of all kinds were plentiful at moderate prices, the ruling rates being:—

	s. d.		s. d.		s. d.
Butter, per lb. ...	2 3	to	2 10	Fowls, per pair	3 4
Cheese ,, ...	1 3		......	Wheat, per bushel	8 0
Fresh pork, per lb.	0 6	to	0 8	Maize ,, ...	6 0
Fresh beef ,, ...	0 6	to	0 8	Barley ,, ...	5 0
Mutton ,, ...	0 6	to	0 8	Potatoes, per cwt.	8 0
Bread ,, ...	0 3½		......	Eggs, per dozen..............	1 10

The principal articles of manufacture were coarse woollen clothes, cabbage-tree hats, salt, candles, leather, boots, drain pipes, and other earthenware. In 1830 the population had increased to 46,300, and the services of mechanics and artisans of various classes were in brisk demand. In 1831 the wage of a skilled mechanic was £2 per week, and there was a strong demand for most descriptions of labour. The cost of living was moderate, although house-rent was high. In 1832 bread was sold at 7d. to 8d. per 2 lb. loaf, and flour at 14s. to 15s. per cwt. During the years, 1832 to 1835, under the system of assisted immigration, 7,683 mechanics and artisans arrived, but the working classes, especially those living in Sydney, strongly

objected to the policy on account of the great reluctance to
the town displayed by the new arrivals. A select committe
the Legislative Council, appointed in 1835, after taking much
dence, reported that good mechanics could earn 30s. to 4
week, and farm labourers 7s. 6d. to 10s. a week with rat
The rent of a house of two rooms in Sydney was 5s. to 10s. a w
board and lodging for single men was 10s. 6d. per week, and
visions of all kinds were cheap, beef being 2d. per lb., sugar,
per lb., and tea, 2s. One of the witnesses stated that he
shipwrights, coopers, and blacksmiths, 7s. to 8s., and sailma
6s. a day, adding, "we consider these wages too high, but fin
impracticable to reduce them, as rather than take less the
will go out of work, and they can afford to do so, because
wages of three or four days will suffice to maintain them f
week." Another witness said he paid millwrights, blacksmi
and engine-drivers 42s. a week, and that a good carpenter c
earn £3 3s., and a stonemason £3 to £4 a week. All the
nesses were agreed as to the difficulty of inducing labourer
move into the country districts, a difficulty which told so seve
against the agricultural and pastoral industries that in 1
another select committee was appointed, to whom evidence
offered to the effect that the average rate of wages was 7s. a
or 42s. a week, for mechanics, with a supply about equal to
demand. It was also deposed that masons were paid 6s. to
plasterers and carpenters, 6s. 3d., quarrymen, 6s., blacksmiths,
a day, and that "no mechanic need ever want employment";
the cost of living was estimated at double the cost in Scotland
the northern parts of England, "but for constancy of employm
there was no comparison." In this contemporary evidence, h
ever, the allusions to the difficulty of obtaining good men, and
high wages enjoyed by mechanics, must be accepted with so
caution. In a population numbering under 98,000 the dem
for good men must have been limited, while the presence of b
labour, and the necessity of finding employment for it must h
interfered very seriously with the regularity of the work to

obtained by free men. There was probably in the country districts a demand in excess of the supply of skilled labourers; but a glance at the following table of ruling rates during the period 1823–38 will show that the wages they could earn offered no inducements at all commensurate with the discomforts and dangers, real and imaginary, they expected to encounter:—

Rate of Wages, 1823 to 1838.

Trade.	1823.	1833.	1836.	1838.
	Per day. £ s. d.	Per day. £ s. d.	Per day. £ s. d.	Per day. £ s. d.
Boat-builders	....	0 6 0	0 7 3	0 6 8
Bookbinders	....	0 6 0	0 5 0	....
Blacksmiths	0 6 0	0 7 0	0 6 8	0 7 0
Bricklayers	0 6 0	0 5 0	0 7 3	0 6 6
Cabinetmakers	0 6 0	0 6 0	0 6 4	0 6 0
Carpenters	0 6 0	0 6 0	0 6 4	0 6 6
Caulkers	0 7 6	0 7 6	0 6 9	....
Chair-makers	....	0 6 0	0 6 0	....
Coopers	0 6 0	0 6 0	0 6 6	0 7 6
Engine and boiler makers	....	0 8 2	0 8 2	....
Farriers	....	0 6 6	0 6 5	0 6 6
Ironfounders	....	0 6 3	0 6 3	0 6 3
Joiners	....	0 5 6	0 6 3	0 7 3
Labourers	0 3 0	0 3 0	0 4 6	0 4 6
Locksmiths	....	0 6 6	0 5 9	0 6 0
Millwrights	0 6 6	0 6 6	0 7 3	0 7 3
Nailers	....	0 5 6	0 4 10	0 6 8
Painters	....	0 5 0	0 5 4	....
Plasterers	0 5 6	0 5 6	0 6 6	0 6 3
Plumbers	....	0 6 0	0 5 8	0 6 4
Quarrymen	....	0 5 6	0 5 6	0 4 6
Shoemakers	0 6 0	0 6 0	0 5 10	0 6 0
Stonemasons	0 6 0	0 6 0	0 7 6	0 6 8
Tailors	....	0 5 6	....	0 6 6
Wheelwrights	....	0 5 6	0 6 0	6 5 6
		Per annum.	Per annum.	Per annum.
Agricultural labourers	....	22 10 0	22 10 0	25 0 0
	Per 1,000.	Per 1,000.	Per 1,000.	Per 1,000.
Brickmakers	0 6 0	0 9 0	0 5 3	0 9 0

The third period.

In 1838 the system of assignment came to an end, and two years later transportation of convicts from England was abolished, so that the third period may be said to have opened under favourable auspices. Immigration was encouraged by votes of public money, and in five years the population increased nearly 80 per

cent., being at the rate of more than 15,000 a year.
discoveries of Sir Thomas Mitchell and others large areas
were thrown open for occupation, giving to trade of all k
powerful impetus, which was strengthened by the amendm
the land laws. In 1839 there was a great increase in wa
ordinary mechanic being able to earn from 8s. to 12s. a d
this was coincident with a rise in the price of provisions, s
in spite of the general demand for all kinds of labour, emplo
was difficult to obtain where rations were included. Bre
sold at 7d. per 2-lb. loaf; potatoes, 1d. to 2½d. per lb.; me
to 5d. per lb.; with a similar increase in the price of
articles of common use. This abnormal condition laste
1841, when wages fell to 7s. 6d. or 8s. a day for mechanic
a year for farm labourers, and £14 to £20 a year for
servants. Notwithstanding the increased cost of livi
rates just quoted were higher than had been paid at an
since the foundation of the Colony, but they were not long
tained. The abolition of transportation, advantageous the
ultimately proved, had the immediate effect of stoppin
expenditure in the Colony of large sums from the
exchequer, and this, with the inflation of 1839 and the fol
years, induced a severe reaction; prices fell, property depr
in value, and the Bank of Australia suspended payment, br
the period to a disastrous close.

The fourth period.

The year 1843 ushered in a period of extreme depr
Employment became scarce and wages very low, while the
of all kinds of property continued to decline; but at th
time the cost of living was greatly reduced, bread selling a
2½d. to 3d. the 2-lb. loaf, meat 2d. to 3d. per lb., sugar 2½d.
per lb.; while dairy produce and vegetables were both pl
and cheap. The most acute stage of the depression was r
in 1845, when the wages of tradesmen varied from 2s.
4s. 6d. a day, and work was not readily obtained even at
rates. About the middle of the period matters brightene
little, but the improvement was speedily followed by a re

the depression growing more and more pronounced, until the discovery of gold in 1851 introduced a new era under brighter conditions. The wages, for each year of the period, of some of the prominent trades, farm labourers and female servants, are given in the following table. For the most part the rates for mechanics represent town wages, the practice in the country districts being for the employer to provide board and lodging and pay wages in proportion, a tradesman earning 33s. a week in town, receiving probably about 15s. a week and board in the country.

Rate of Wages, 1843 to 1851.

Trade or Calling.	1843.	1844.	1845.	1846.	1847.	1848.	1849.	1850.	1851.
	per day.	per day.	per day.	per day.	per day.	per day.	per day.	per day.	per day.
Males—	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Carpenters	5 0	4 0	4 0	5 2	5 6	5 3	4 9	4 6	6 5
Smiths	5 0	4 0	4 3	5 2	5 6	5 3	4 9	4 6	6 8
Masons	5 0	4 0	4 0	5 2	5 6	5 3	4 9	4 6	7 8
Bricklayers	5 0	4 0	4 0	5 2	5 6	5 3	4 9	4 6	6 0
Wheelwrights	4 0	3 6	3 3	4 8	5 0	5 3	4 9	4 6	6 4
	per ann.	per ann.	per ann.	per ann.	per ann.	per ann.	per ann.	per ann.	per ann.
With Board and Lodging—	£	£	£	£	£	£	£	£	£
Farm labourers	15	15	18	20	23	21	18	18	20
Shepherds	14	14	17	20	23	21	18	18	20
Females—									
Cooks	15	15	18	20	22	21	17	17	20
Housemaids	15	15	15	17	17	17	14	13	16
Laundresses	12	12	15	17	19	18	15	15	16
Nursemaids	10	10	12	15	16	14	9	9	9
General servants	12	12	16	16	18	16	12	14	16
Farm-house servants	10	10	12	16	17	16	12	11	13
Dairy-women	10	10	12	16	17	16	12	11	13

The fifth period.

The discovery of gold not only put an end to the depression of the previous period but it effected a revolution in the industrial conditions of the Colony. According to contemporary evidence the supply of labour in many occupations speedily became exhausted, and there were more persons desirous of hiring labourers than there were labourers to be hired. In 1853 the market was bare of many articles, others were scarce, and all were at high prices; bread was selling at 8d. per 2-lb. loaf, flour at £27 per ton, and other necessaries of life in like proportion. Owing to the violence of the changes introduced, trade and commerce were in a very unsatisfactory state, and all productive industries except

gold-mining were practically suspended for a time, since
impossible to obtain the assistance necessary for profitably w
them. In 1855 there was some slight abatement of the
fever," though wages and the price of provisions were still
above the average, but by the end of 1857 the disturban
ceased to exercise any violent effects. A glance at the fol
table will show the magnitude of the changes in the labour
during this period. Prominent trades only are given, si
may well be imagined, many industries ceased entirely
matters again resumed a normal condition :—

Rate of Wages, 1852 to 1857.

Trade or Calling.	1852.	1853.	1854.	1855.	1856.
	per day. s. d.	per day. s. d.	per day. s. s.	per day. s. s.	per day. s. s.
Bricklayers	9 0	15 6	25 to 30	18 to 25	16 to 18
Blacksmiths	9 0	12 9	20 to 25	14 to 16	8 to 12
Carpenters	9 0	12 6	15 to 20	12 to 15	12 to 15
Coopers	....	....	15 to 20	10 to 12	12 to 14
Cabinetmakers	....	....	15 to 20	12 to 15	12 to 15
Farriers	....	....	12 to 15	10 to 12	9 to 12
Plumbers and glaziers	....	....	16 to 20	12 to 15	12 to 15
Joiners	....	....	17 to 20	12 to 15	12 to 14
Ironfounders	....	....	16 to 20	14 to 16	12 to 14
Locksmiths	....	....	18 to 22	16 to 18	12 to 15
Quarrymen	....	....	18 to 21	16 to 18	12/6 to 15
Shoemakers	....	....	......	14 to 22	12 to 14
Wheelwrights	9 0	15 0	18 to 20	14 to 16	12 to 14
Plasterers	9 0	16 0	25 to 30	14 to 16	13 to 17
Painters	....	....	13 to 16/8	13 to 14	10 to 12
Stonemasons	9 0	16 0	25 to 30	......	12/6 to 15
	per annum.	per annum.	per annum.	per annum.	per annum.
With Board and Lodging—	£	£	£	£	£
Cooks	22	24	28	28	25
Housemaids	16	17	22	22	21
Laundresses	20	20	28	28	24
Nursemaids	16	17	18	18	18
General servants	17	18	28	23	22
Farm-house servants	14	15	25	22	20
Dairy-women	14	15	25	22	20

Port Curtis rush.

Matters had grown comparatively settled when the ru
Port Curtis occurred in 1858, causing a brief revival o
excitement. The "gold fever" had brought to Australi
only young stalwart enterprising men of great enduranc
capable of adapting themselves to almost any conditions o
but also multitudes of others whose chief idea was that w

could be acquired almost without exertion. Unable to endure the hardships of a digger's lot, without trade or profession, and capable of only the lightest manual labour, they had mostly drifted back to Sydney, where a large number of unemployed had gathered together when the rush broke out. Joining the unemployed from the mines of Victoria and New South Wales, they rushed in thousands to the new field, 4,000 leaving Sydney alone in the space of a month, while 6,000 went from other parts of Australia. A few weeks sufficed to show that the Port Curtis gold-field could not maintain so many, and in October, 1858, the majority left for Sydney, where they roamed the streets disappointed and unemployed until drawn away by the attractions of other rushes. In the beginning of 1859 prices had fallen considerably, and the rate of wages for skilled labour receded to 10s. or 11s. a day, remaining at that level until the close of the period.

The eight or nine years during the rage of the gold fever exercised a very great economic effect on the condition of the working classes; for had there been no discovery of gold it is not improbable that, with respect to both standard of living and remuneration of labour, the conditions existing prior to 1850 would have long remained without any great change for the better. In those days the standard of labour in England was the practical test of the condition of the working classes in Australia, who were thought well off simply because their earnings enabled them to enjoy comforts beyond the reach of their fellows in England Since the gold era this has been changed, and the standard now made for themselves by Australian workers has no reference to any other country.

The sixth period.

Under the provisions of Sir John Robertson's Land Act, which came into operation in 1861, land was thrown open for selection before survey. This new principle had lasting if not immediately apparent effect on the condition of the working classes, giving them opportunities of employment not previously open to them.

Few incidents calling for special comment marked the in history of this period, during which the only important va in the condition of labour arose from the vicissitudes seasons, vast areas of the Colony having been visited alte by droughts and floods. The average wages of the peri given in the following table :—

Rate of Wages, 1862 to 1871.

Trade or Calling.	1862.	1863.	1864.	1865.	
	per day.	per day.	per day.	per day.	
	s. d.	s. d.	s. d.	s. d.	
Carpenters	10 0	9 9	8 6	8 6	
Blacksmiths	10 0	9 6	9 6	9 6	
Wheelwrights	10 6	9 6	9 6	9 6	
Bricklayers	12 0	10 0	9 6	9 6	
Masons	12 0	10 0	10 0	10 0	
	per week.	per week.	per week.	per week.	
With Board and Lodging—	s. d. s. d.	s. d. s. d.	s. d. s. d.	s. d. s. d.	s.
Farm labourers	12 0 to 15 0	12 0 to 14 0	11 0 to 12 0	11 0 to 12 0	11
Shepherds	15 0	12 0 ,, 14 0	12 0 ,, 14 0	12 0 ,, 14 0	12
Females—					
Cooks	10 0 to 15 0	10 0 ,, 12 0	10 0 ,, 12 0	10 0 ,, 14 0	10
Housemaids	8 0 ,, 10 0	8 0 ,, 10 0	8 0 ,, 10 0	8 0 ,, 10 0	8
Laundresses	12 0 ,, 15 0	10 0 ,, 12 0	10 0 ,, 12 0	8 0 ,, 10 0	10
Nursemaids	6 0 ,, 10 0	6 0 ,, 10 0	6 0 ,, 10 0	6 0 ,, 10 0	6
General servants	10 0	8 0 ,, 12 0	8 0 ,, 12 0	8 0 ,, 10 0	8
Farm-house servants and dairy-women	9 0	7 0 ,, 10 0	7 0 ,, 10 0	7 0 ,, 10 0	8

Trade or Calling.	1867.	1868.	1869.	1870.	
	per day.	per day.	per day.	per day.	
	s. d.	s. d.	s. d.	s. d.	
Carpenters	8 6	8 6	8 0	8 6	
Blacksmiths	9 6	9 6	9 6	10 0	
Wheelwrights	9 6	9 6	8 6	8 3	
Bricklayers	9 6	9 6	8 6	10 6	
Masons	10 0	10 0	8 6	9 6	
	per week.	per week.	per week.	per week.	
With Board and Lodging—	s. d. s. d.	s. d. s. d.	s. d. s. d.	s. d. s. d.	s. d.
Farm labourers	11 0 to 12 0	11 0 to 12 0	11 6 to 13 6	11 6 to 14 0	10 0
Shepherds	12 0 ,, 14 0	12 0 ,, 14 0	12 6 ,, 14 0	11 6 ,, 14 0	10 0
Females—					
Cooks	10 0 ,, 12 0	10 0 ,, 12 0	10 0 ,, 12 6	10 0 ,, 11 6	11
Housemaids	8 0 ,, 10 0	10 0	8 0 ,, 10 0	8 0 ,, 10 0	8 0
Laundresses	10 0	12 0	10 0 ,, 11 6	10 0 ,, 11 6	10
Nursemaids	6 0 to 8 0	8 0	8 0	8 6	8 0
General servants	8 0 ,, 10 0	10 0 to 12 0	10 0	10 0 to 11 6	8 0
Farm-house servants and dairy-women	8 0 ,, 10 0	10 0	8 0 to 10 0	8 0 ,, 10 0	8 0

The seventh period.

In considering the table just given regard must be paid to the fact that although there was a marked decline in the daily wage received by skilled mechanics, the prices of commodities in general use also steadily fell. About the year 1872 public attention began to be awake to the necessity of pushing on with the construction of railways, roads, and bridges, to open up the interior of the country, and an expansive public works policy involving the expenditure of large sums of borrowed money was accordingly initiated. Coincident with this, and chiefly on the part of graziers desirous of protecting themselves from the incursions of free selectors, there arose a great demand for land, readily responded to by the State, and the public lands were bought up with such eagerness that in the five years 1872-77 the revenue derived from this source increased from £500,000 to nearly £3,000,000, and the public exchequer was overflowing. Wages were high, employment steady, provisions cheap, and numbers of men, for the most part young and energetic, were attracted to the Colony by the alluring prospects held out to them, the annual increment to the population being doubled within a few years. To keep pace with the demand for labour the Government maintained a vigorous immigration policy, and in the ten years which closed with 1885 nearly 49,000 persons were assisted to these shores from the United Kingdom, and were readily absorbed in the general population. In all likelihood during this period industrial conditions would have improved without any lavish expenditure by the Government, but what was probable was made certain by the favourable combination of circumstances alluded to, whose influence was steadily maintained till the termination of the period about the end of 1885. In the following table of average wages for each year of the term the quotations are classified as daily or weekly, according to the ordinary modes of payment:—

AGES, 1872 to 1885.

76.	1877.		1878.		1879.		1880.		1881.		1882.		1883.		1884.		1885.	
d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
0	10	8	10	8	10	8	10	0	10	0	11	0	11	0	11	0	11	0
0	11	0	10	0	10	0	10	0	9	6	10	0	10	0	10	0	10	0
0	11	0	11	0	11	0	11	0	11	0	12	6	12	6	12	6	12	6
0	11	0	10	6	10	6	10	6	10	6	11	6	11	6	11	6	11	6
0	11	6	11	6	11	6	11	6	11	6	12	0	12	0	12	0	12	6
6	9	6	9	6	9	6	9	6	9	6	11	0	11	0	11	0	11	0
0	10	0	10	0	10	0	9	6	9	6	9	6	9	6	9	6	9	6
0	7	0	7	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0

The eighth period.

The tide of improvement had reached its highest level during the years 1882–1885, and began to recede in 1886, when employment became difficult to obtain and wages began to fall. In 1886–7 work in some of the southern district collieries was suspended by strikes and disputes for nearly twelve months; in 1888 the coal-miners of the northern district were on strike for several months; in 1888 and 1889 the completion of various large public works threw out of employment some 12,000 men—no inconsiderable proportion of the unskilled labour of the country—and large numbers of unemployed were congregated in and around Sydney; in 1890 the maritime and pastoral industries were disturbed by strikes and disputes very hurtful to the community in general, and to the working classes in particular. In 1892 another disastrous strike occurred, causing the silver mines of Broken Hill to remain idle for fully three months. It will thus be apparent that a period under vastly changed conditions has been entered upon since 1885, but no accurate estimate of the ultimate effect of these changes can as yet be attempted. So far there has been no reduction in the nominal rate of wages in most trades, but for unskilled labour the rates have experienced a decided decline.

Purchasing power of wages.

For the periods under review in the foregoing pages money wages only have been dealt with, but it is a matter of much greater importance to ascertain the rate of real wages—that is, the purchasing power of wages in comparison with their nominal value. The data for making this comparison on the basis of the price level of common articles of consumption are given in another chapter under the heading of "Cost of Living." Such a comparison must necessarily be defective in some respects, since with changing conditions come other forms of labour, and with higher wages greater consumption, so that in comparing present times with days long past there is danger of weighing what is now important against what was formerly of no consequence; notwithstanding this it gives a more exact notion of the value of wages at different periods than can be obtained in any other way. It also affords the only true standard by which material conditions at different

times can be accurately gauged.
compared the average daily and we
of money wages for several descri
real wages on the basis of their pu
level of the principal articles of
since the foundation of the Colony.

Period.	Level of money wages.		
	Mechanics.	Farm and other labourers.	Fe serv
Prior to 1821	53	40	3
1821 ,, 1838	63	47	3
1838 ,, 1843	84	56	4
1843 ,, 1851	50	53	4
1851 ,, 1857	147	73	6
1861 ,, 1872	89	75	7
1872 ,, 1886	108	100	10
Since 1886...	100	100	10

From this statement the years 18
owing to the impossibility of est

more satisfactory. This period, which was one of untoward depression, gave place to the stirring times accompanying the discovery of gold, when money wages rose more than 200 per cent., and at one time averaged twice as much as the wages now current. Nevertheless the industrial condition of the period from 1851 to 1857, though so much in advance of anything previously experienced in the Colony, and even of the period which immediately succeeded, was certainly inferior to that which has prevailed since 1871. This may appear strange in view of the high wages which were paid during the gold rush; but the advance then occurring was attended by a considerable if not a commensurate increase in the price of necessaries, while from 1871 onwards the rates of wages and the cost of living have moved in opposite directions, so that the condition of mechanics since the year named has been better than at any period of the Colony's history.

Improved condition of farm labourers.

The improvement in the lot of farm and station labourers and female servants is still more marked. The rise in wages of male hands has, excepting the period 1843-51, been continuous, while the increase in the pay of females has suffered no interruption, even during the disastrous years preceding the gold discovery. Coincident with the rise of nominal wages which this table exhibits, there has been a marked advance in the standard of living of the working population of the Colony, an advance even more rapid than that of wages. The cheapening of many articles of food and dress which has taken place of late years, without a corresponding fall of wages, has enabled the homes of the bulk of the population to be made more comfortable. The acquisition of comforts begets the desire for further comforts, and it is therefore unlikely that any fall in wages will be assented to which will necessitate the labouring classes decreasing the standard of living they now enjoy; on the contrary, it is more than probable the standard will be still further raised. In this connection it may be pointed out that the evidence of the savings banks of the Colony cannot be taken as conclusive of the prosperity or

Improved standard of living.

depression of the working population; for if the stan
living indulged in be raised more rapidly than the rate of
it is obvious that the margin out of which savings are m
be decreased, although the actual condition of the masses
materially advanced.

MANUFACTORIES.

Census of Industries.

Under the provisions of the Census and Industrial Retu
a census of industries was taken during the year 189
information obtained is in the highest degree interesti
altogether too voluminous for insertion in these pages;
however, form the basis of a special report now being p
The particulars set out in the following pages were for t
part obtained under the authority of the Act above referr

Manufactories of New South Wales.

Although New South Wales cannot be considered an im
manufacturing country, this source of national wealth
no means been neglected. During the year 1892 ther
2,279 manufactories or works of various descriptions, em
altogether a total of 46,881 hands, of whom 43,178 were ma
3,703 females. These works had machinery in operation dev
a total of 26,892 horse-power, and valued at about £4,5
The average value of plant was £2,002; the average hors
employed, 11·8; and the hands per factory, very nearly 21
average number of hands per factory in the metropolis w
and in the country about 16. Compared with the scale on
manufactories are worked in the older countries of the
these averages will appear very small, but should evoke no s
when the nature of the works is considered, and the sparse
the population throughout a large portion of the Colony.

Progress of manufactures.

There has, however, been fair progress, and, as will b
from subsequent tables, the growth of the manufacturing
has been in keeping with the general progress observable in
departments of industry. The number of persons depende

their livelihood on the manufacturing interest may be estimated at about 200,000, or about one-sixth of the population of the Colony.

The number of hands stated above, as well as other particulars relating to 1892 given in subsequent pages, are to be accepted as approximations, and may possibly be increased when the returns are finally closed. At the date of going to press there were still some proprietors of manufactories who, in spite of the stringent provisions of the Census Act, had neglected to comply with the law. Returns will, of course, be extracted from these recalcitrants, which may somewhat alter, but not materially, the figures here given.

Increased number of hands.

Results of Industrial Census.

In the following table the gradual progress of the manufacturing industry of the Colony since the year 1878-9 may be readily traced. It will be noticed that in the short period embraced by the table, the number of hands employed has advanced from 24,741 to 46,881, or over 89 per cent. during fourteen years. The returns for the years previous to 1892 were obtained for the most part through the agency of the police, in collecting the information under the Census Act a different plan was adopted. A list of the names and addresses of the persons carrying on manufactories or works having been compiled, a form of return was left at every establishment, which the managers or proprietor was required to fill in, and after making a solemn declaration as to its correctness, return to the office of the Statistician. The process of issuing and collecting the returns was one of great labour, but the information obtained will prove to be highly interesting. It is satisfactory to be able to record that the results of the present industrial census show the substantial accuracy of the returns collected in past years by the agency of the police, the principal differences between the tabulation of the present and former returns will be found to be in classification. In former years the hands employed in large establishments in which more than one kind of work was carried on, were distributed as far as could be to their several industries.

It is open to question, however, whether the results thus obtained do not give a more exact picture of the condition of the industries than the plan now followed of crediting all hands to the mai industries, which is also the general practice in the statistic departments of the other colonies. This question, however, doe not arise in connection with the following table, which shows the number of hands employed in works and factories, 1878–92.

Hands employed.

Year.	No. of Hands employed.		
	Male.	Female.	Total.
1878–79	21,512	3,229	24,741
1879–80	22,989	2,695	25,684
1880–81	26,452	1,807	28,259
1881–82	28,819	2,372	31,191
1882–83	31,824	2,065	33,889
1883–84	32,350	2,384	34,734
1884–85	36,390	2,404	38,794
1885–86	38,255	3,420	41,677
1886–87	40,160	3,367	43,527
1887–88	39,365	3,686	43,051
1888–89	41,299	4,265	45,564
1889–90	40,725	4,264	44,989
1890–91	41,582	4,553	46,135
1892	43,178	3,703	46,881

Hands employed occasionally.

The figures in the foregoing statement represent the number usually employed, but besides these there are other hands whose employment is casual. Thus, in 1892, the average number of persons finding employment was 46,881, whereas the greatest number employed was 56,332, the excess comprising 7,289 males and 2,162 females, in all 9,451. The maxima of the different industries, as might be naturally expected, fell at various periods throughout the year, so that the whole number of 56,289 were not employed at any specific time in the various industries dealt with under the classification of manufactories and works, and it is probable the greatest number employed at any one time did not in reality exceed the usual number of persons for whom employment was found by more than 6,000.

Classification of hands.

If the hands be classified into the broad divisions shown below, some interesting results are disclosed. About 7 per cent. of the persons employed are managers, and 3 per cent. clerks. The number of persons working outside the factories was 3,064. Those included under this heading are chiefly carters and others engaged in delivery, and persons employed on wages preparing material to be worked up in the factories. The following are the figures of each class :—

Description of Industries.	Overseers employed.	Clerks employed.	Other persons employed inside workshops.	Persons employed outside workshops.	Total.
Treating raw material, the production of pastoral pursuits	172	45	1,738	75	2,030
Preparing materials used as food or drink	625	315	6,220	829	7,989
Clothing and textile industries......	315	70	5,150	237	5,772
Manufacture of building materials..	609	231	5,550	1,316	7,706
Metal and machinery works	392	192	9,254	123	9,961
Shipbuilding, repairing, &c.	56	36	1,419	6	1,517
Furniture and bedding works	89	25	942	11	1,067
Paper, printing, binding, and engraving...........	336	260	3,886	134	4,616
Vehicles, harness, saddlery	211	35	2,275	3	2,524
Light and heat..................	72	131	1,171	292	1,666
Miscellaneous	183	75	1,737	38	2,033
Total	3,060	1,415	39,342	3,064	46,881

Employment of children.

Child labour is very little employed in the factories of the Colony ; this is what might be expected, seeing that by the law regulating primary education children are required to attend school until they reach their fourteenth year. The Census returns required that the number of persons under 15 years of age should be stated, and the total so returned was 818, viz., 590 males and 228 females, but these figures are only approximate, and it is not improbable that owing to the remarkable reluctance of female apprentices and improvers to state their ages, the number is under the truth.

Employment in the Metropolitan district.

There has been some tendency for the number of hands en in the metropolitan district to increase faster than in th portions of the Colony. Thus in 1881 the hands employe metropolitan district are returned at 17,808, while in 18 numbered 25,917, showing an increase of 8,109; in th parts of the Colony the number in 1881-2 was 13,383, 1892, 20,921, showing an increase of 7,538 in 10 years facilities for the establishment of large industries in and Sydney are considerable—a commanding position as regar munication with the outside world, propinquity to the coa easy communication with the chief seats of raw production Colony, density of the population, and abundant water su these have tended to centre in the metropolitan district chief industries. In the extra-metropolitan districts the pr works are smelting works, saw-mills, sugar works, and flou or industries of a domestic character, intended to meet a day demand, or for the treatment of perishable goods.

Hands employed in metropolis and country.

The following table shows the number of hands employed metropolitan district as compared with the remainder Colony for the past eleven years ended with 1892:—

Year.	Hands employed.		Year.	Hands employ	
	Metropolitan District.	Other Districts.		Metropolitan District.	Di
1881-2	17,808	13,383	1887-8	24,199	1
1882-3	18,854	15,035	1888-9	25,885	1
1883-4	19,653	15,081	1889-90	24,999	1
1884-5	22,028	17,766	1890-91	28,058	1
1885-6	23,282	18,395	1892	25,917	2
1886-7	24,900	18,627			

Future prospect of manufactures.

As regards the future, a vast field is open for the de ment of manufactures in New South Wales. Producing, does, the raw material of various kinds necessary for sup the primary wants of civilization, it is evident that the C must ere long find a way into some parts of this field. Th great cause which has hitherto operated to prevent the larger development of manufactures is the impossibility of drawing, from a population so small and so widely scattered, a fair profit on the capital required to carry them on. Hitherto abundant employment has been found for labour and capital in the primary productive industries, and, these industries continuing to be profitable and population to increase, whenever the prospect of profit presents itself, manufactures, adapted to the conditions as well as to the wants of the country, will naturally establish themselves, affording other profitable investments for capital, and avenues for the employment of labour.

Preparation of raw materials.

As regards the preparation of raw materials, the products of pastoral pursuits, the amount of employment offering has been not a little affected by the seasons, so that, as will be seen below, under the heads of boiling-down, fellmongering, tanning, wool-washing, and allied pursuits, the number of hands employed has only varied from 2,122 in 1881–2 to 2,030 in 1892, while that of the works has fallen from 298 to 144 :—

Description of Manufactory or Works.	Number of Works.	Average Number of Hands employed.						Power of Plant or Machinery.	Approximate Value of Plant or Machinery.
		Managers.	Clerks.	Children.	Adults.	Outside Factory.	Total.		
								H.-power.	£
Boiling-down	24	29	3	..	175	4	211	87	5,280
Bone Manure	4	4	1	..	18	..	23	90	1,770
Glue	2	2	1	..	7	1	11	20	150
Tallow Refinery	1	1	4	4	36	..	45	26	2,077
Tanneries	55	59	5	13	749	13	839	334	27,148
Wool-washing	58	77	31	8	728	57	901	756	52,688
Total	144	172	45	25	1,713	75	2,030	1,313	89,113

Boiling-down and wool-washing works confined to station use have not been included in the above table. The number of hands given is the average at work throughout the year, but at certain seasons many more persons are at work, especially at washing. As would naturally be anticipated, women do n much employment in the industries comprised in the for category, the total employed being only eleven. The num children employed is also small—the table shows only twent

Food and drink.

The establishments connected with the preparation of fo drink form one of the largest classes of works in New Wales. Many places which would come under this headin from which returns were received have been excluded fro table given below, as owing to the difficulty of procuring plete list of all the very small places at which food product prepared it has been thought advisable to adhere to an arb distinction and leave out of the tabulation all places in whi than 5 hands are employed :—

Description of Manufactory or Work.	Number of Establishments.	Average number of Hands employed.						Power of Plant or Machinery.
		Managers.	Clerks.	Inside Factory.		Outside Factory.	Total.	
				Children.	Adults.			Horse-power.
Aerated Waters	118	131	27	34	628	5	825	489
Bacon	7	8	..	..	44	5	57	68
Bakeries	75	84	38	27	1,052	22	1,223	92
Breweries	48	73	88	..	586	2	749	1,142
Butter	99	101	13	102	510	47	773	572
Cheese	21	22	..	8	145	18	193	37
Condiments	7	13	13	3	130	..	159	83
Confectionery	15	19	14	53	346	..	432	97
Cornflour	2	3	2	1	33	4	43	42
Flour Mills	71	82	52	..	388	45	567	1,025
Freezing	5	19	40	..	404	2	465	55
Fruit Preserving	5	6	4	3	76	2	91	8
Ice Works	3	3	..	..	10	2	15	16
Jam	5	9	6	9	134	..	158	24
Meat Preserving	5	6	1	..	352	..	359	246
Spice	2	3	3	..	10	..	16	22
Sugar	23	39	12	..	1,114	675	1,840	4,123
Vinegar	3	3	2	..	13	..	18	12
Yeast	1	1	..	..	5	..	6	..
Total	515	625	315	240	5,980	829	7,989	8,753

Included with the foregoing figures are 10 female overse managers, 6 clerks, 84 children, 583 adults, in all 683 fe

In such establishments as aerated water factories, breweries, butter and cheese factories, flour and sugar mills, and jam factories, there is a large fluctuation in the amount of labour employed, in some seasons many more people being engaged than in others. Taking the whole of the above works, probably for a portion of the year, about 1,500 more hands are employed than are given in the table.

Breweries.

The brewing industry has been stationary since 1886, when an excise of 3d. per gallon was imposed on the local manufacture. It is open to question, however, whether the falling-off in production is due to this cause, as there is evidence that the depression which marked the trade of the different colonies during the year immediately preceding 1886, brought about a lessened demand for all forms of alcoholic liquors. The invoice value of ale and beer imported, and on which duty was paid during 1891, was £390,410, not a very large amount considering that £296,214 of it was for beer in bottle, which the colonial breweries have, so far, not attempted to produce on any extensive scale. The following table illustrates the position of the brewing and bottling industry and its progress during the last eleven years :—

Beer imported.

Year.	Hands Employed.	Quantity manufactured—Ale, Beer, &c.
		Gallons.
1881-2	637	....
1882-3	699	....
1883-4	747	....
1884-5	788	....
1885-6	805	*11,000,000
1886-7	987	*10,000,000
1887-8	804	9,720,000
1888-9	850	9,300,200
1889-90	826	9,515,200
1890-1	793	9,619,600
1892	749	10,594,000

* Only approximately ascertained.

Sugar-growing.

The growth of sugar-cane, and the manufacture of sugar therefrom, in the northern districts of the Colony, is now becoming an

important industry, the output having increased from 1
cwt. of sugar and 354,402 gallons of molasses in 1881, to 3
cwt. of sugar and 883,840 gallons of molasses in 1892.
1887 there has been a considerable increase in the b
of land under this crop, and, in the year just closed, ther
about 22,262 acres planted with cane, of which 8,623 acre
Number of sugar mills. productive. In 1877–8 the number of mills was 50, of wh
used steam-power, whilst 26 were worked by cattle, an
number of workmen employed was 1,065. These increas
the year 1885–6, to 83 steam-mills and 19 worked by cattle,
Tendency to separate sugar-growing and making. the number of men employed, and the quantity of suga
molasses turned out, correspondingly increased; but since th
fall in the value of sugar has caused many of the smaller est
ments to be closed, and the cane grown has been to an incr
extent sold to the large factories, which pay to the growers a
but slightly below that given prior to 1885. Almost every
the tendency to concentrate the manufacture of sugar in
central establishments is increasing; in the West Indie
elsewhere small mills are rapidly disappearing to make roo
larger establishments, where business is strictly confined
industrial process of sugar making, the planters attending
to the cultivation of the cane. The following shows the parti
of the sugar industry for the last eleven years :—

Year.	Sugar Mills.		Horse-power.		Quantity of Sugar Manufactured.	Quantity of Molasses Manufactured.
	Worked by Steam.	Worked by Cattle.	Steam.	Cattle.		
					cwt.	gallons.
1881–2	59	17	1,432	63	159,048	354,402
1882–3	70	16	978	49	270,000	560,000
1883–4	79	14	2,651	44	280,000	580,000
1884–5	86	12	2,855	50	230,000	450,000
1885–6	83	19	2,598	32	369,280	635,000
1886–7	57	7	2,531	21	275,000	507,000
1887–8	57	7	2,210	26	450,000	880,000
1888–9	36	... ...	1,995	...	225,580	241,088
1889–90	38	2	3,034	10	380,320	494,145
1890–1	31	2	*	*	530,660	1,074,080
1892	23	......	4,123	...	370,000	883,840

* Not ascertained.

In addition to the 1,840 hands usually employed, there were 713 others employed at busy periods, comprising altogether 2,553. It is very possible that casual hands have been included in some of the years shown in the foregoing statements.

Sugar refineries.

There was only one establishment in the Colony for refining raw sugar in 1892. The quantity of sugar melted in the year was 676,000 cwt., of which 171,100 cwt. was imported, chiefly from Queensland. The remaining 504,900 cwt. was raw sugar produced in the Colony. The total quantity made at the mills was returned at 370,000 cwt. The returns for the last eleven years relating to the sugar refineries are given in the subjoined table :—

Year.	Sugar Refineries.	Number of Hands employed.	Quantity of Sugar melted.
			cwt.
1881-2	2	222	514,400
1882-3	2	235	470,000
1883-4	2	214	468,000
1884-5	2	172	370,000
1885-6	2	224	384,000
1886-7	2	214	510,000
1887-8	1	200	537,900
1888-9	1	210	550,149
1889-90	1	230	600,000
1890-1	1	300	660,000
1892	1	372	676,000

The numbers given above of hands employed are only those in constant employment ; in addition there are many men employed for longer or shorter periods discharging ships, storing sugar, and other work incidental to the trade.

Colonial Sugar Company.

In New South Wales, almost from the introduction of the sugar-growing industry, the manufacture of sugar has been largely in the hands of the Colonial Sugar Refining Company, whose mills on the Clarence, Richmond, and the Tweed have been referred to in another part of this work. This company also owns the only sugar refinery in New South Wales, where the produce of their mills in this Colony is refined, together with a portion of the output of their factories in Fiji and Queensland. The other establishments, locally known as refineries, whether worked by steam or cattle, are mostly small factories in which sugar of an inferior quality is turned out, some of which is consumed the balance is used in general consumption after underg further process of refining.

Mills for grinding and dressing grain.

The amount of mill-power for grinding and dressing is ample for treating the flour consumed in the Colon the Colony does not produce sufficient grain for its own r ments, it is not at all probable that there will be any increase in the number of flour-mills, as those existing are at work only part of their time. Wind and horse-power, as to the dressing of grain, have fallen into disuse, and though water-mills still exist, there are not so many as formerl their number is decreasing. The figures in the following approximate closely to the actual amount of wheat treated local mills :—

Flour made in the Colony.

Year.	New South Wales Wheat treated.	Imported Wheat treated.	Total Wheat treated.	Total F mad
	Bushels.	Bushels.	Bushels.	Ton
1881	3,400,934	108,096	3,509,030	70,
1882	3,136,461	629,841	3,766,302	75,
1883	3,733,171	175,138	3,908,309	78,
1884	3,983,246	418,434	4,401,680	88,
1885	3,927,273	497,775	4,425,048	88,
1886	2,402,057	984,773	3,386,820	67,
1887	4,460,629	233,535	4,694,164	93,
1888	3,975,030	1,509,646	5,484,676	114,
1889	1,442,000	2,605,130	4,135,128	86,
1890	6,049,000	133,258	6,182,258	128,
1891	3,120,340	578,005	3,698,345	77,

Flour-mills.

The following are the particulars of the flour-mills in ope in the Colony for the last eleven years :—

Year.	Flour-mills.			Year.	Flour-mills.		
	No.	Horse-power.	Hands Employed.		No.	Horse-power.	Em
1881-2	157	2,963	695	1887-8	127	2,848	
1882-3	163	3,091	703	1888-9	110	2,954	
1883-4	154	2,847	685	1889-90	103	2,713	
1884-5	161	3,270	662	1890-1	102	2,363	
1885-6	159	3,185	662	1892	71	1,625	
1886-7	133	2,735	571				

In addition to these there were in 1881 one windmill of ten horse power, and one horse-mill of two-horse power; in 1882 one windmill of ten-horse power, and two horse-mills of fourteen-horse power; and in 1887 one horse-mill of twelve-horse power, the hands employed in all of which are included in the table.

Textile fabrics.

The third class of industries is connected with the manufacture of clothing and textile fabrics. The different descriptions of works are given below:—

Description of Manufactories or Works.	Number of Establishments.	Average number of Hands employed.											
		Managers.		Clerks.		Children.		Adults.		Outside Factory.		Total.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Boots and shoes	67	112	10	24	4	38	23	2,028	442	37	..	2,239	479
Clothing	105	144	21	32	5	21	21	929	1,305	16	184	1,142	1,536
Furriers	1	1	1	..	..	..	..	9	..	..	..	10	1
Caps and hats	3	3	..	..	..	..	..	12	11	..	..	15	11
Oilskin clothing	3	3	1	2	..	..	..	13	31	..	..	18	32
Umbrellas	1	1	..	..	..	..	..	2	3	..	..	3	3
Woollen mills	5	8	..	2	1	3	..	112	56	..	..	125	57
Shirtmaking, &c.	6	7	3	..	..	1	..	3	87	..	..	11	90
Total	191	279	36	60	10	63	44	3,108	1,935	53	184	3,563	2,209

Dressmakers.

In addition to the hands shown in the foregoing list, there were 157 males and 1,582 females employed in dressmaking in factories; but as these hands were not included in the statistics of former years, they have been omitted from the present statement. According to the returns, the number of dressmaking establishments large enough to be termed factories, should a Factories Act be passed, was 73.

Employment of power.

Power is not employed to any extent in the industries included in the foregoing class, except in the case of boot factories and woollen mills. In boot factories there is employed pla at £34,650, and machinery ordinarily driven by 214 hors in clothing factories the value of plant is £4,593, and ir mills the plant is valued at £11,400, the machine 120 horse-power.

Woollen manufactures.

As a wool-growing country New South Wales is ap specially adapted for the manufacture of woollen go accordingly that industry was one of the earliest orga the Colony. The endeavour to promote the local manufa woollen goods has so far met with little success. A nu factories have struggled along for some time, but have headway, the largest establishments finding it needful to their business the making of slop clothing, and by this m enabled to carry on at a profit. The machinery in non mills is of the best kind, and altogether the industry pointing.

The following table shows the number of woollen- operation, the number of employés, and the quantity manufactured :—

Year.	Number of Woollen-mills.	Hands Employed.			Qu Woo Man
		Male.	Female.	Total.	
1881-2	5	178	157	335	3
1882-3	8	266	119	385	3
1883-4	9	260	112	372	3
1884-5	7	175	137	312	3
1885-6	6	134	189	323	3
1886-7	8	104	78	182	3
1887-8	5	101	71	172	3
1888-9	5	117	60	177	2
1889-90	5	110	62	172	2
1890-1	4	94	61	155	3
1892	5	125	57	182	3

Number of Woollen Mills decreased.

From these figures it will be noticed that the number of woollen-ills in operation has decreased, and that the five now at work rovide employment for 182 persons only. During the years om 1881-2 to 1885-6 more than twice this number of hands were mployed. The quantity of cloth manufactured is, however, but ttle short of the produce of 9 mills and 372 hands, in 1883.

Boot Factories.

The employment afforded in the manufacture of boots has hardly ept pace with the growth of population, as will be perceived om the table below. The improved efficiency of the machinery nployed is, however, apparent in the increased output :—

Year.	Number of Factories.	Hands Employed.		
		Males.	Females.	Total.
1881- 2	71	1,849	377	2,226
1882- 3	62	1,695	341	2,036
1883- 4	61	1,748	377	2,125
1884- 5	68	1,871	418	2,289
1885- 6	65	1,672	433	2,105
1886- 7	68	1,856	416	2,272
1887- 8	60	1,837	436	2,273
1888- 9	57	1,618	427	2,045
1889-90	59	1,955	465	2,420
1890- 1	60	2,262	544	2,806
1892	67	2,239	479	2,718

Hands in boot factories.

From the above figures it will be noticed that there is a slight crease in the number of hands, from 2,226 in 1881-2 to 2,718 in 92, while the number of establishments has decreased from 71 67. This would indicate a tendency for large factories to supersede small works, and drive the latter out of com this particular branch of manufacture. The average hands employed in each factory has risen from 31·3 in 37·5 in 1892, and the number of pairs of boots manufa 2,500,000.

Metal and machinery works.

The number of metal and machinery works in operat 1892, the average number of hands employed, and mac plant used, were as follows :—

Description of Manufactory or Work.	Number of Establishments.	Average number of Hands employed.					
		Managers.	Clerks.	Children.	Adults.	Outside Manufactory.	Total.
Agricultural implements ..	14	14	1	2	109	1	127
Blacksmiths	44	54	7	4	283	8	356
Boiler-making	4	5	3	2	57	..	67
Brassworks	6	9	2	8	37	..	56
Coppersmiths	3	6	1	..	34	..	41
Cutlery	3	3	..	..	5	..	8
Engineering	47	91	80	53	2,577	1	2,802
Galvanised-iron works	46	50	24	19	469	..	562
Iron works, foundries	41	45	32	20	673	..	770
Ornamental metal	3	3	..	..	15	..	18
Lead works	1	1	..	..	4	..	5
Nail works	2	2	1	..	10	..	13
Railway spring	1	1	1	..	12	..	14
Railway carriage..........	13	10	..	..	2,408	..	2,408
Smelting	23	84	28	14	2,308	112	2,354
Tinsmiths	11	15	1	8	76	1	101
Wire works	6	9	11	..	239	..	259
Total..........	268	402	192	130	9,114	123	9,961

Quartz-crushing

In addition to the hands shown in the foregoing were 961 hands employed in quartz-crushing works, hands were not included in the statistics of former have been omitted from the present statement. The quartz-crushing works was returned as 20, the value of and plant as £326,788, and the horse-power develop machinery was stated to be 5,159.

The classification of works connected with machinery, engineering, and foundries presents many difficulties, as the trades are in many cases carried on side by side in the same establishment, and what one year is designated by a proprietor an "engineering establishment," may, in the following year, be returned as a "foundry," according to the importance of the work done in the year. The various descriptions of ironworks have been separately shown above, so far as it has been possible to classify them, but the figures referring to kindred industries should be read together.

Prospects of the iron trade.

The iron trade should, in time, form one of the great staple industries of the Colony. Every natural advantage possessed by the great iron and machinery producing countries of the world—such as England and Belgium—is also present here. Not only are iron and coal deposited in abundance, and in positions easily accessible and readily worked, but, as pointed out on page 92, the local iron ore is exceedingly rich. Scarcely any progress, however, has been made in iron smelting, and nearly the whole stock of pig and wrought iron required for the local manufactories is imported. The other descriptions of metal works, both for smelting and manufacturing, are in a more forward state.

Metal Works.

Works for the treatment of metals in 1881 numbered 218, in which were engaged 4,525 persons, while in 1892 the number of works had increased to 254, and the hands employed to 9,834, agricultural implement factories not being included in either year. The increased number of hands employed in smelting works will be noticed. In 1881 there were 1,517 hands employed in 14 establishments, the works now number 23, and the hands employed, 2,354. There has been a large increase in the hands employed making or repairing railway motors, carriages, and other appliances, the employés in 1881 numbering 100, and in 1892, 2,408. The bulk of these were employed in the workshops connected with the State railways.

Building materials.

Industries directly or indirectly connected with the supply or preparation of building materials afford employment to a large

number of persons, chiefly in saw-mills. The followin
shows the hands employed during 1892 :—

Description of Manufactory or Work.	Number of Establishments.	Average number of Hands employed.						Mach
		Managers.	Clerks.	Children.	Adults.	Outside Factory.	Total.	Power
								h.p.
Asphalt and Pavement	9	11	5	..	63	7	86	74
Bricks	95	111	25	6	1,314	106	1,562	1,34
Cement and Lime	14	14	8	..	196	12	230	12
Joinery	56	85	26	2	658	14	785	33
Marble Works, &c	23	25	12	14	185	3	239	2
Modelling and Patterns	2	2	1	1	12	..	16	..
Paint and Varnish	4	6	3	..	20	..	29	3
Potteries	10	11	4	9	116	2	142	52
Saw-mills	299	341	146	19	2,907	1,162	4,575	5,019
Stone-crushing	3	3	1	..	28	10	42	56
Total	515	609	231	51	5,499	1,316	7,706	7,071

Saw-mills.

The number of persons employed in the various timber d
in saw-mills, &c., has also increased at a good ratio dur
last ten years. The establishments in 1881–2 numbered 2
ploying a total number of 2,382 persons, while in 1892 the
299 mills, and the number of hands employed was 4,57
power of plant was 5,019 horse-power, and its value
£242,323; the quantity of timber sawn was estima
220,696,000 feet 1-inch thick. The number of saw-mi
hands employed during the years shown were :—

Year.	Number of Saw-mills.	Hands employed.	Year.	Number of Saw-mills.
1881–2	280	2,382	1887–8	322
1882–3	334	3,013	1888–9	317
1883–4	370	3,318	1889-90	325
1884–5	376	3,477	1890–1	346
1885–6	415	3,783	1892	299
1886–7	323	3,284		

Light and heating.

The hands employed in establishments connected with lig
heating show some increase during every year. Thus dur
past five years there were employed :—

Year.	Hands.
1886–7	910
1887–8	1,189
1888–9	1,310
1890–91	1,412
1892	1,666

The improvement, however, is chiefly due to the additional hands employed in gas making :—

Description of Manufactory or Work.	Number of Establishments.	Average number of Hands employed.						Machinery and Plant.	
		Managers.	Clerks.	Children.	Adults.	Outside Factory.	Total.	Power.	Value.
								h.p.	£
Coke	5	7	2	..	73	..	82	62	10,452
Electric lighting	8	8	3	..	37	5	53	755	47,078
Gas works	35	41	118	..	865	287	1,316	557	504,617
Kerosene	3	11	8	..	196	..	215	78	21,430
Total	51	72	131	..	1,171	292	1,666	1,452	583,577

Printing and book-binding.

The trades connected with printing and bookbinding are perhaps more keenly affected by general prosperity or depression than any other industries. The effect of stagnation in trade matters will be seen from the figures relating to employment in the printing and allied works during the last few years prior to 1892 :—

Year.	Hands employed.
1887–8	3,647
1888–9	4,154
1889–90	4,496
1890–1	4,024
1892	4,616

The following shows the subdivision of the hands for the year 1892 :—

Description of Manufactory or Work.	Number of Establishments.	Average number of Hands employed.						Machinery and Plant.	
		Managers.	Clerks.	Children.	Adults.	Outside Factory.	Total.	Power.	Value.
								h.-p.	£
Printing	146	309	251	124	3,424	134	4,242	655	384,435
Paper-box and bag	4	9	1	1	90	....	101	4	2,915
Electro stereotyping	2	3	..	..	6	....	9	5	700
Bookbinding	6	7	..	2	83	....	92	2	3,040
Lithographing	3	6	7	5	77	....	95	14	8,329
Typefounding	1	1	..	7	7	....	15	....	9,000
Paper Mills	1	1	1	..	60	....	62	200	20,000
Total	163	336	260	139	3,747	134	4,616	880	428,419

Vehicles and saddlery.

Employment in the trade connected with vehicles and
is chiefly found in effecting current repairs. The number
establishments of either class shown below are few. The
ing figures refer to 1892 :—

Description of Manufactory or Work.	Number of Establishments.	Average number of Hands employed.						Mac
		Managers.	Clerks.	Children.	Adults.	Outside Factory.	Total.	Power.
Coaches and Waggons	151	170	26	26	1,818	1	2,041	h.p 147
Saddlery and Harness	39	41	9	14	417	2	483	17
Total	190	211	35	40	2,235	3	2,524	16

Ship-building.

Works connected with the building or refitting
employed 1,517 hands during the year 1892, by far the
portion of these were engaged in or about the port of
Nearly all the docks, too, are in Sydney, where is situa

Furniture Trades.

The furniture and allied trades now employ fewer hands than five or six years ago, the numbers being :—

	Hands employed.
1886-7	1,253
1887-8	1,236
1888-9	1,451
1889-90	1,348
1890-91	1,192
1892	1,067

The decline in the number of hands being persistent since 1888. Included with the 955 hands engaged making furniture are 246 Chinese. Formerly their number was much larger, but the Chinese Restriction Act has effectually prevented the recruiting of hands for the shops employing Chinese, and has enabled the persons now in the trade to demand and obtain higher wages. With furniture are included bedding works, as it was found impossible to separate the industries.

Bedding Works.

Description of Manufactory or Work.	Number of Establishments.	Average number of Hands employed.						Machinery and Plant.	
		Managers.	Clerks.	Children.	Adults.	Outside Factory.	Total.	Power.	Value.
								h.-p.	£
Blinds	2	2	1	1	20	...	24	6	250
Curled Hair	1	1	...	1	6	...	8	4	400
Flock	1	1	...	...	4	...	5	22	1,300
Furniture	63	74	22	13	838	11	958	111	12,084
Mats	1	2	...	...	10	...	12	3	342
Picture Framing	3	3	1	...	23	...	27	3	350
Wood Turning and Carving	6	6	1	1	25	...	33	38	2,810
Total	77	89	25	16	926	11	1067	187	17,536

Miscellaneous industries.

Besides the industries already dealt with there are numerous others not readily falling under any of the categories into which the manufactories have been grouped. These have been placed together in the following table, though there is little relation between any two there included. None of the industries, tobacco manufacturing perhaps excepted, find employment for any large

number of hands, but many of them promise to devel
important interests as there is ample field for them in the

Description of Manufactory or Works.	Number of Establishments.	Average number of Hands employed.					
		Managers.	Clerks.	Children.	Adults.	Outside Factory.	Total.
Baskets	3	3	..	..	32	1	36
Boxes and Packing Cases	4	4	2	1	43	1	51
Brooms	8	9	1	6	66	..	82
Chaff-cutting	40	45	17	4	187	20	273
Chemicals	4	7	5	3	61	..	76
Cooperage	4	5	2	18	71	..	96
Dye Works	4	7	..	..	34	..	41
Electro-plating	4	6	3	..	20	..	29
Eucalyptus Oil	2	2	2	..	20	10	34
Explosives	2	3	1	6	21	..	31
Glass (bottles)	2	2	1	..	44	..	47
,, (ornamental)	5	6	..	2	35	..	43
Jewellery	15	18	7	4	100	3	132
Leather (fancy)	2	3	..	1	22	..	26
Rope	3	8	2	7	94	2	113
Soap and Candles	18	24	9	..	155	1	189
Tobacco	6	16	15	18	484	..	533
Other Works (not included above)	10	15	8	..	178	..	201
	136	183	75	70	1,667	38	2,033

Soap and candles.

Tallow being one of the staple products of the count
manufacture of soap and candles, as might be expected, is
established, and capable of fully supplying the local requir
The quantity of toilet and fancy soap made, is, however,
but small, and in quality it is scarcely equal to that impo
lower prices. Common soap of local make is slightly cheap
the imported article, and being also quite as good, it co
the local market. The quantity said to have been made in
was 198,880 cwt. against 89,745 cwt. in 1892, but it is d
if the figures be correct. The quantity of candles manuf
was 2,796,700 lb. in 1888, and 2,772,356 lb. in 1892,
supply, including imports, was 7,187,932 lb. and 7,827
respectively. The following table shows the progress
industry during the past eleven years, from which it
that of the 59 factories at work during 1888 only 18 now
The quantities stated in the table are those returned
manufacturers, and are given for what they are worth, b

believed that the information for years previous to 1892 is little to be relied on :—

Year.	Number of Factories.	Hands Employed.	Quantities Manufactured.	
			Soap.	Candles.
			cwt.	lb.
1881–2	38	232	106,962	....
1882–3	40	263	112,513	....
1883-4	38	220	121,794	....
1884–5	34	204	131,244	....
1885–6	40	223	138,849	1,683,360
1886–7	46	321	155,430	2,199,282
1887-8	52	367	190,060	2,442,960
1888–9	59	397	198,880	2,796,700
1889–90	30	250	164,800	2,388,440
1890–1	27	194	143,520	1,545,920
1892	18	189	89,745	2,772,356

Tobacco manufactories.

The use of tobacco manufactured in the Colony has, to a very large extent, superseded that of imported tobacco. The amount of cigars and cigarettes made in the Colony is, on the other hand, very small compared with the total quantity of these commodities consumed, although during the last two years the quantity of cigarettes locally manufactured is largely in excess of former periods. In 1889 there were 9,200 lb. of leaf used in the local manufacture of cigarettes ; in 1892 the quantity had increased to 76,260 lb. The weight of each description of tobacco used in the Colony during 1892 amounted to :—

	Imported Manufactured.	Made in the Colony.	Total.
	lb.	lb.	lb.
Tobacco	928,266	1,948,608	2,876,874
Cigars	231,896	5,860	237,756
Cigarettes	72,090	76,260	148,350

Imported leaf largely used.

A large amount of imported leaf is used in the manufacture of tobacco in the Colony, the proportion during 1892 being 611,100 lb. of imported leaf, chiefly American, to 1,419,628 lb. of New South Wales leaf. The quantities of each kind of tobacco made in the Colony, as well as the weight of leaf used in the manufacture, will be found in the following table. The quantity of leaf given does not include stalks and stems, which are taken out in the process of manufacture. The proportion of leaf not used would be about 25 per cent. of the total weight.

cco Factories.

† Tobacco Leaf Used.		Quantity Manufactured.		
Colonial Leaf.	Imported Leaf.	Tobacco.	Cigars.	Cigarettes.
℔.	℔.	℔.	℔.	℔.
1,480,683	688,788	2,133,168	9,402	6,901
1,495,191	561,514	2,044,240	7,125	5,340
1,611,527	552,217	2,147,418	6,057	10,269
1,463,815	610,485	2,062,380	3,624	8,296
1,440,244	545,743	1,971,394	5,393	9,200
1,345,620	569,420	1,892,592	4,120	18,328
1,403,240	639,148	1,982,991	3,412	55,985
1,419,628	611,100	1,948,608	5,860	76,260

GOVERNMENT EMPLOYÉS.

The Government of the Colony is a very considerable factor in the labour market, as it employes no less than 32,250 officials, including the police and defence forces, also those temporarily engaged.

Government employés.

The following table gives the distribution amongst the Departments:—

Department.	Number.
Colonial Secretary	3,360
Railways and Tramways	11,790
Public Instruction	4,840
Public Works	4,230
Postmaster-General (Post and Telegraphs)	4,000
Colonial Treasurer	1,380
Justice	1,180
Lands	780
Mines	550
Other Departments	140
Totals	32,250

The figures given above include a large number of persons who are only partially employed during the year, and are in receipt of very small salaries.

STEAM POWER.

The power used in the Colony for manufacturing, transporting, and other purposes is equivalent to 155,125 horse-power, or 131 horse-power for every thousand persons, a rate comparing not unfavourably with other countries, as will be seen from the

subjoined statement computed from Mulhall's Dictio
Statistics :—

Country.	Steam power employed.	Per 1,0 popul
	H.p. Thousands.	H
United Kingdom	9,200	2
France	4,520	1
Germany	6,200	1
Russia	2,240	
Austria	2,150	
Italy	830	
Spain	740	
Belgium	810	1
Holland	340	
United States	14,400	2
New South Wales	155	1

Steam-power.

Of the total power employed in the Colony, by far the
portion is derived from steam. The services for wh
power is used are shown in the following table, from w
will be seen that land and water transport absorb 84,68
power, or 56 per cent. of the total horse-power consumed

and comprises machinery worked by horses and cattle. In the table given below the number of machines using each class of power is shown, with the aggregate horse-power ; by this last term is understood the actual power required to work the processes, not the power that the boilers or machinery are capable of generating:—

Classification of Industries.	Machinery driven by			Horse-power.		
	Steam.	Gas.	Other Power.	Steam.	Gas.	Other Power.
Treating raw material, product of pastoral pursuits	123	2	26	1,265	12	36
Connected with food or drink, or the preparation thereof	616	16	33	8,620	26	107
Clothing and textile fabrics	19	10	...	280	51	10
Building materials	481	6	40	6,853	42	176
Metal works, machinery, engineering, &c.	296	16	21	3,843	69	46
Docks, ships, ship-building, and sail-making	32	2	...	1,300	4	...
Furniture, bedding, &c.	21	5	...	168	19	...
Paper, printing, binding, engraving, &c.	35	90	6	494	386	...
Vehicles, harness, saddlery	19	...	...	164	...	...
Light and heat	95	5	16	1,446	3	3
Other works	112	8	4	1,392	16	61
Total	1,849	160	146	25,825	628	439

Machinery employed.

Returns regarding the employment of machinery in manufactories have been obtained for some few years, and the aggregate figures for each year are given below. The figures are given for what they are worth, which, however, for years previous to 1892 cannot be claimed to be more than approximate :—

Year.	Horse-power of Machinery employed in Manufactories.
1886-7	25,192
1887-8	26,152
1888-9	24,990
1889-90	25,790
1890-1	24,662
1892	26,892

TRADE U

Legislation on Trade Unions.

The subject of Trade Unionism h
in only one instance in this Colo
1881. This measure commences
of any trade union shall not be
render its members liable for co
because it is in restraint of trade ;
agreement be made void or voidabl
in the Act shall enable any Court t
in respect to agreements between
trade union with reference to the
transact business, employ, or be
of subscriptions, penalties, or appl
specified purposes. At the same ti
to make such agreements unlawful.
Act nor the Companies Act are to

Registration of Trade Unions.

they be registered under those Act
for the registration of such trade
provided always that if one of the
be unlawful the registration shal
Friendly Societies is made registra
are made for the appointment of
establishment of rules, the prep
dissolution or amalgamation, chan

Definition of Trade Unions.

The term "Trade Union" is define
whether temporary or permanent
between workmen and employers,
men, or between employer and em
conditions on the conduct of any t
combination would or would not, i
have been deemed to have been
reason of some one or more of its
trade." Few of the Trade Unions
visions of the Act relative to retur
regard to their membership canno

Unions registered.

Under the provisions of the Act there have been 141 unions registered, of which 7 were societies promoted by employers and 134 by workmen. The registration of one union of each class has been withdrawn, and 6 employés' unions have been dissolved according to law, and some 16 others appear to have collapsed, though no intimation as to their cessation of operations has been received by the Registrar. The following is a classification of the Trade Unions now in operation:—

Shipping	12
Railway and Road construction and general labour	7
Mining and kindred trades	13
Roads and Railway traffic	10
Building construction	28
Food, drink, and clothing trades	16
Printing trades	7
Miscellaneous trades	18
	111
Unions of employers	6
Total Unions remaining under the Act	117

IMPORTATION OF LABOUR.

Agreements Validating Act.

Since the cessation of assisted immigration by the State there has been very little labour imported by the capitalists and manufacturers of the Colony; in fact almost all the artisans and labourers who have arrived here within the last few years have been those who have left the other Australasian Colonies, in the hope of improving their position in New South Wales. The question of the importation of labour has not been largely dealt with by legislation in this Colony. The chief enactment on the subject is the Agreements Validating Act, 39 Victoria, No. 29, which provides that agreements made in any place beyond the Colony, for a period of service not exceeding two years, shall be as binding and effectual as though they had been entered into within the Colony, provided that the contract or agreement shall have been made and subscribed in the presence of some officer duly authorised in that behalf by the Governor and Executive Council of New South Wales.

PATENTS.

Liberality of the law.

The law relating to the registration of inventions and ments has been in force since 1853, but it is only with years that the provisions of the Act have been availed great extent. In 1879 and 1887 the law was amended fees reduced to the nominal sum of £5 for complet Patent, and £2 for a Certificate of Provisional Protecti latter may, if application be made within twelve month granting, be converted into a patent on the payme additional £3. The result has been that the busines Patent Office has greatly increased. The inventions in 1891 were for the most part not local but foreign, feature has marked the operations of the Patent Office inception. The following is the number of patents an ments thereof for inventions or improvements registe 1855 to 31st July, 1887, and Patents, Certificates of P Protection, &c., granted from 1st August, 1887, to end of

Under Acts 16 Vic. No. 24 and 42 Vic. No. 27

Year.	No. of Registrations.			Year.	No. of Registr	
	Patents.	Assignments.	Total.		Patents.	Assignments.
1855	......	......	3	1872	43	5
1856	......	......	1	1873	43	6
1857	......	......	1	1874	39	21
1858	......	......	10	1875	34	16
1859	......	......	11	1876	44	18
1860	......	......	10	1877	62	27
1861	......	......	13	1878	45	19
1862	......	......	14	1879	57	16
1863	18	4	22	1880	89	23
1864	15	2	17	1881	113	13
1865	15	5	20	1882	129	21
1866	20	5	25	1883	149	24
1867	20	4	24	1884	183	29
1868	21	2	23	1885	161	27
1869	27	5	32	1886	203	31
1870	32	4	36	1887	137	21
1871	27	5	32			
Total to 31st July, 1887......				......	1,789	353

Under Act 51 Vic. No. 3.

Year.	Letters Patent.	Letters Patent to supersede certificates.	Certificates of Provisional Protection.	Assignments.	Licenses.
*1887	225	12	183	23	......
1888	490	75	252	50	......
1889	518	89	278	84	3
1890	494	105	274	102	2
1891	540	101	252	111	3

* From 1st August to 31st December.

Operation of Act of 1887.

The numbers of certificates of Provisional Protection and Letters Patent applied for since the amending Act became law on the 1st August, 1887, were 1,239 and 2,267 respectively, and during 1891 the totals were 252 and 540, while 111 assignments were registered during the latter period. In addition to these, 101 Letters Patent to supersede certificates and 3 Licenses were registered in 1891. The countries from which applications for certificates of Provisional Protection and Letters Patent in New South Wales were received, were as follows :—

Country.	Registered during 1891.	Total registered since the 1887 Act became law.	Country.	Registered during 1891.	Total registered since the 1887 Act became law.
Australasia—			Austria	5	11
New South Wales	330	1,526	Belgium	2	7
Victoria	161	694	Russia	....	5
New Zealand	38	168	Cape of Good Hope	....	3
South Australia	32	119	New Caledonia	1	3
Queensland	16	74	Denmark	1	2
Tasmania	1	7	Portugal	1	2
Western Australia	....	1	Hawaiian Islands	1	2
Great Britain	131	562	Argentine Republic	....	1
United States	53	225	India	....	1
Germany	6	35	South African Republic	....	1
France	6	29			
Canada	6	16	Total	792	3,506
Sweden	1	12			

It will thus be seen that out of the total of 3,506 applications, 1,526, or 43 per cent., were made by persons residing in the Colony, though not necessarily for inventions perfected in New South Wales.

COPYRIGHT.

The Copyright Act in force in this Colony was passed
May, 1879, and became law on 1st July, 1879. The
divided into four parts, dealing with the following sub
Part I. Literary, Dramatic, and Musical Works; Part I
Arts; Part III. Designs; Part IV. Miscellaneous Provi

Registration of books, &c.

Part I provides for the registration of copyright in b
publications, as understood in the widest sense of the te
for every new edition containing any alterations in the
and also for the registration of playright, or the right of repr
or performing dramatic or musical productions, whether pr
printed and published or not. Copyright is registered
Colony only for works first published here, and comm
run on first publication, representation, or performance;
remedy can be obtained or legal proceedings taken for a
done before registration. The term of protection is 42 y
the life of the author plus 7 years, whichever is the longer
Nothing blasphemous, seditious, immoral, or libellous is en
be registered, nor any mere advertisement. Literary w
which registration is sought must be submitted to the Regi
a complete state as published; but dramatic or musical wo
be in manuscript, and will be returned. A best copy of
and each subsequent edition of every printed "book" pu
in the Colony must be delivered within two months of pub
to the respective Librarians of the Free Public Library an
Library of the University of Sydney. The penalty for de
delivering Library copies is the forfeiture of the value of t
and a sum not exceeding £10. Library copies must be d
whether the book is registered or not. Lectures receive pr
without being registered, on compliance with the requiren
the Act; but lectures are public property if delivered
University, Public School, or College, or on any public four
or by any individual, by virtue of, or according to any gift,
ment, or foundation. The registration fee is 5s. and the
certificate, if one be required, 3s.

Period of copyright.

Copyright in paintings, &c.

Part II gives copyright in paintings, drawings, works of sculpture, and engravings, including the design thereof, for 14 years, and in photography and the negatives thereof, for 3 years. The fees to be paid are:—1s. for photographs and chromographic cards, 5s. for other subjects, and 3s. for certificates. Copyright in a work of fine art when not executed under commission does not necessarily either follow the work or remain with the artist, but ceases to exist, unless it has been secured by agreement between the parties at or before the time of the sale of the original. The work must be made in the Colony, and be new and original to entitle it to copyright.

Copyright in designs.

Part III. Under this part of the Act protection can be obtained for new and original designs, not previously published in the Colony or elsewhere, such designs being for articles of manufacture and works of art, whether for purposes of utility, ornament, or otherwise. The protection does not extend to the article itself but only to the design thereof; consequently it does not apply to any mechanical action, principle, contrivance, application, or adaptation, or to the material of which the article is composed. The articles which are capable of being registered are divided by the Act into fourteen classes, two years protection being assigned to some, and three years to others. The registration fee is ten shillings, and registered designs must bear a registration mark.

Part IV contains general provisions, and amongst other matters declares copyright to be personal property, assignable at law, and transmissible by bequest, and subject in case of intestacy to the same law of distribution as other personal property.

International and Intercolonial copyright.

The Copyright Law of England is comprised chiefly in some fourteen Acts of Parliament, of an unusually obscure and conflicting character, and extensively elaborated by judicial decisions. Under the "International Copyright Act, 1886," 49 & 50 Vic. c. 33, and the Orders in Council thereunder, the greater part of this body of law, together with the terms of the Copyright Convention of Berne, is made reciprocally applicable to Great Britain and each of its Dependencies, and to the countries that are parties to the

Convention, with their Colonies, namely:—Germany, Spain, F Great Britain, Häiti, Honduras, Italy, The Netherlands, S and Norway, Switzerland, Luxembourg, Monaco, and Tu previous copyright treaties being for the most part abrogate

International copyright.

Copyright when registered in a foreign country is cove the local law within that country, and by the International right Acts and the Convention, within the British Dom and *vice versa.*

Intercolonial copyright.

Publication of literary matter in any part of the Dominions now gives copyright throughout the whole Dom by registering in the country of origin if there is a local r kept there, or at the London Office if not. Registered C copyright can be protected in any Court in the Dominio the production of a copy of entry from the Copyright O the country of origin, authenticated by the Governor or Minister of that country.

The total number of registrations of copyright effecte been :—

	During 1892.	From passing Act in 31st Dec 18
PART I. *Literature* :—		
Printing and publishing right—		
Books	76	4
Periodicals	....	1
Music	10	
Playright—		
Drama	4	
Music...	6	1
Total	96	60
PART II. *Fine Arts* :—		
Painting	11	1
Drawing	7	4
Sculpture	....	
Engraving	5	13
Photography	22	58
Total	45	78
PART III. *Designs.*—Useful, Ornamental, or otherwise	15	35
Grand Total	156	1,82

The yearly receipts, since the Act became law, under each head of copyright, were :—

Year.	Literature.			Fine Arts.			Design.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1879	13	14	0	4	18	0	9	19	0	28	11	0
1880	12	8	0	9	6	0	30	8	0	52	2	0
1881	8	3	0	6	11	0	20	8	0	35	2	0
1882	14	2	0	1	19	0	11	13	0	27	14	0
1883	8	4	0	6	5	0	11	14	0	26	3	0
1884	11	10	0	6	17	0	29	8	0	47	15	0
1885	12	8	0	5	17	0	21	18	0	40	3	0
1886	16	9	0	6	12	0	18	1	0	41	2	0
1887	33	10	0	6	19	0	19	13	0	60	2	0
1888	25	8	0	6	8	0	9	3	0	40	19	0
1889	16	17	0	4	6	0	4	10	0	25	13	0
1890	17	6	0	6	7	0	5	1	0	28	14	0
1891	19	1	0	3	1	0	12	13	0	34	15	0
1892	30	10	0	7	15	0	7	10	0	45	15	0
Total ...	239	10	0	83	1	0	211	19	0	534	10	0

WAGES.

Constant demand for labour.

In New South Wales, as in most other Australian Colonies, the rapid settlement of the country has created a demand for labour of all kinds, which could not be satisfied except by a constant accession of labourers from other countries. This demand, which has been continuous for many years, has resulted in the establishment of a rate of wages much higher than is ordinarily found in older lands. The wave of depression which affected most countries during the past few years has not left this Colony untouched, and the labouring classes shared largely in the general suffering. Although the normal rate of wages sanctioned by the various labour organizations shows little decline, the actual amount which workmen were willing to accept in most trades was below these rates. The following rates may be taken as now current in the Colony :—

Wages accepted by trades.

Rates of Wages of various Trades, &c., during 1891.

Metal Workers.

Black-iron workers	9/-	per day of 8 hours.
Blacksmiths	8/- to 11/4	„ 8 „

Metal Workers—continued.

Blacksmiths' strikers	6/- to 8/-	per day of	8	hours.
Boiler-makers	9/4 to 10/-	,,	8	,,
Bolt-screwers	6/8 to 8/-	,,	8	,,
Brass-finishers	9/- to 10/-	,,	8	,,
Brass moulders.................	9/4 to 10/-	,,	8	,,
Copper-smiths	9/4 to 10/8	,,	8	,,
Corrugated-iron workers.....	9/-	,,	8	,,
Dressers	6/- to 6/8	,,	8	,,
Engineers	8/- to 10/8	,,	8	,,
Engine-drivers	5/10 to 8/4	,,	8	,,
Engine-fitters	9/4 to 10/8	,,	8	,,
Furnacemen	8/8 to 10/8	,,	8	,,
Galvanised-iron workers......	9/-	,,	8	,,
Iron-moulders	9/4 to 11/-	,,	8	,,
Labourers (in iron trades) ...	6/- to 8/-	,,	8	,,
Millwrights	9/4 to 10/8	,,	8	,,
Pattern-makers	9/- to 11/-	,,	8	,,
Plumbers	9/4 to 10/8	,,	8	,,
Shipbuilders	9/4 to 10/-	,,	8	,,
Strikers	6/- to 7/2	,,	8	,,
Tinsmiths	9/4 to 10/-	,,	8	,,

Leather Workers.

Bootmakers—				
Foremen	52/6 to 65/-	per week of	50	hours.
Makers (piece)	30/6 to 40/-	,,	50	,,
Finishers (piece)	36/- to 50/-	,,	50	,,
Clickers	35/- to 42/6	,,	50	,,
Sole-cutters	50/- to 52/6	,,	50	,,
Closers	11/6 to 31/-	,,	50	,,
Blockers	40/-	,,	50	,,
Machine operators (men)	40/- to 45/-	,,	50	,,
,, (boys)	8/- to 15/-	,,	50	,,
Inkers (boys)	7/-	,,	50	,,
Nail Feeders (boys)	6/-	,,	50	,,
Rough Stuff Cutters	40/-	,,	50	,,
Machinists (females) forewomen	27/6 to 35/-	,,	50	,,
Machinists (females)	10/- to 25/-	,,	50	,,
Improvers	6/- to 17/6	,,	50	,,
Tiers-off (girls)	2/6 to 23/-	,,	50	,,
Apprentices (boys)	12/- to 15/-	,,	50	,,
Tannery Hands—				
Foremen	50/- to 60/-	,,	54	,,
Curriers	45/- to 56/-	,,	54	,,
,, (apprentices)	10/- to 30/-	,,	54	,,
Rollers	45/-	,,	54	,,
Beamsmen	42/- to 50/-	,,	54	,,
Tanners	40/-	,,	54	,,
Limesmen	40/-	,,	54	,,
Yardmen	40/-	,,	54	,,
Harness-makers	45/-	,,	54	,,
Portmanteau-makers	36/- to 40/-	,,	54	,,
Saddlers	40/- to 50/-	,,	54	,,
Warehousemen	57/6	,,	50	,,

Stationery, Printing, &c.

Bookbinders (men)	8/- to 11/-	per day of	8	hours.
,, (women)	22/6-	per week of	48	hours.
Compositors	10/-	per day of 8 hours; piecework, 1/1 and 1/2 per 1,000; 1/4 per hour overtime.		
Embossers (forewomen)	30/-	per week of	48	hours.
,, (women)	12/6 to 21/-	,,	48	,,

Stationery, Printing, &c.—continued.

Engravers (metal)	60/- to 100/-	per week of 48 hours
,, (wood)	50/- to 60/-	,, 54 ,,
Illuminators	50/-	,, 54 ,,
Lithographers	10/- to 13/4	per day of 8 hours.
Pressmen	9/- to 10/-	,, 8 ,,
Rubber Stamp Makers	20/- to 80/-	per week of 48 hours.
Rulers	27/6 to 55/-	,, 48 ,,
Stationers	10/- to 12/-	per day of 8 hours.
Stereotypers	9/- to 10/-	,, 8 ,,
Warehousemen	60/- to 80/-	per week of 48 hours

Woollen Cloth Manufactory.

Foremen	45/- to 50/-	per week	....
Carders and spinners (men)	28/- to 70/-	,,	......
,, ,, (boys and girls)	8/- to 14/-	,,	......
Weavers (men, on piece)	36/- to 60/-	,,	......
,, (women ,,)	15/- to 25/-	,,	......
,, (boys, ,,)	15/- to 18/-	,,	......
Picker and winders (women)	15/- to 20/-	,,	......

Clothiers—continued.

			Hours.
Tailors (order)—tailoresses (piece)	15/- to 37/6	per week	48
,, ,, apprentices (girls)	2/6 to 12/6	,,	48
,, ,, ,, (boys)	5/- to 20/-	,,	48
,, (slop)—cutters (males)	60/- to 100/-	,,	48
,, ,, foreman	80/- to 100/-	,,	48
,, ,, examiners	60/- to 80/-	,,	48
,, ,, pressers (piece)	35/- to 70/-	,,	48
,, ,, trimmers	15/- to 70/-	,,	48
,, ,, machinists (males)	£2 5/- to £4	,,	48
,, ,, ,, (females)	15/- to £2	,,	48
,, ,, finishers	18/- to £2	,,	48
,, ,, improvers	7/6 to 17/6	,,	48
,, ,, apprentices	2/6 to 10/-	,,	48
,, ,, complete (manual labour)	25/- to £2 15/-	,,	48
Drapers' assistants	£2 to £5	,,	60
Hatters	8/- to 10/-	per day	8
Cap-makers	40/-	per week	48
Oilskin-makers	8/-	per day	8
Machinists	23/- to 25/-	per week	48
Shirt-makers—forewomen	25/-	,,	48
,, cutters	75/- to 80/-	,,	48
,, machinists (females)	12/6 to 20/-	,,	48
,, blousers	17/6-	,,	48
,, fitters	22/-	,,	48
,, toppers	15/-	,,	48
,, button-holers	12/- to 18/-	,,	48
,, improvers (females)	5/- to 12/6	,,	48
Dressmakers—cutters and fitters	£2 to £7	,,	48
,, heads of tables	£1 5/- to £1 15/-	,,	48
,, skirt drapers	£1 10/- to £2 10/-	,,	48
,, bodice hands	13/- to 20/-	,,	48
,, skirt hands	12/- to 18/-	,,	48
,, sleeve hands	12/- to 18/-	,,	48
Milliners—head milliners and saleswomen	£2 to £5	,,	48
,, trimmers	10/- to £1 5/-	,,	48
,, improvers	5/- to 10/-	,,	48
,, apprentices	Nil to 2/6	,,	48

Clothiers—continued.

Underclothing and White Sewing—cutters	£1 15/- to £2 10/-	per week
,, forewomen	£1 to £1 10/-	,,
,, machinists	10/- to 20/-	,,
,, apprentices	2/6 to 5/-	,,
,, home workers	10/- to £1 5/-	,,

Food and Drink Supply.

Aerated waters makers—foremen	50/ to 70/-	,,
,, ,, bottlers	35/- to 40/-	,,
,, ,, carters	40/- to 60/-	,,
,, ,, cart-boys	10/- to 20/-	,,
,, ,, bottle-washers (male)	30/- to 40/-	,,
(female)	12/- to 15/-	,,
,, ,, wirers	35/-	,,
Biscuit-makers—foremen	40/- to £4	,,
,, bakers	6/8 to 10/-	per day
,, heads of departments	£2 5/- to £2 15/-	per week
,, general hands (male)	£1 5/- to £1 15/-	,,
,, packers (females)	8/- to £1 5/-	,,
,, boys	7/6 to 12/6	,,
Bread-bakers—foremen	£3 to £4	,,
,, journeymen	£2 10/- to £3	,,
,, general hands	£2 to £2 5/-	,,
,, apprentices	10/- to £1 5/-	,,
,, pastry-cooks	£2 10/- to £3	,,
Brewery hands—brewers	£3 to £14 10/-	,,
,, cellarmen	45/- to 70/-	,,
,, bottlers	30/- to 50/-	,,
,, draymen	44/6 to 50/-	,,
,, labourers	42/- to 42/6	,,
,, cask washers	39/-	,,
,, town hands	40/-	,,
Butchers—slaughtermen	£2 10/- to £3 10/-	,,
,, shopmen	30/- to 60/-	per week (wit board)
,, small goods men	35/-	per week
,, boys	15/- to £1	per week (wit board and residence)

Food and Drink Supply—continued.

			Hours.
Condiment-makers—mill hands	35/- to 42/-	per week	50
,, packers	17/6	,,	50
,, blockers (male)	39/-	,,	50
(female)	8/-	,,	50
,, screeners (boys)	9/-	,,	50
Confectioners—foremen	£3 to £3 10/-	,,	48
,, pastry-cooks	26/- to 70/-	,,	48
,, general hands	25/- to 35/-	,,	48
,, storemen	20/- to 35/-	,,	48
,, packers	35/- to 40/-	,,	48
,, apprentices (male and female)	5/- to 20/-	,,	48
Fishermen	£1 to £3	,,	...
Grocers' assistants	£1 10/- to 60/-	,,	66
Jam-makers—boilers	35/- to 55/-	,,	50
,, labellers	12/- to 30/-	,,	50
,, packers	12/- to 25/-	,,	50
,, canners	12/- to 30/-	,,	50
Millers	50/- to 100/-	,,	60
Mill hands—engineers	60/-	,,	60
,, oilers	40/- to 42/-	,,	60
,, stokers	40/-	,,	60
,, purifier-men	35/- to 45/-	,,	60
,, wheat-samplers	42/-	,,	60
,, packer-men	40/- to 45/-	,,	60
,, smutter-men	35/- to 42/-	,,	60
,, loaders	40/-	,,	60
,, floormen	20/-	,,	60
,, flour-dressers	45/-	,,	60
Sugar-refiners—chemists	16/8 per day (with board and lodging).		
,, foremen	10/- ,,	,,	,,
,, labourers	7/6 ,,	,,	,,
Sugar-mills—pan-boilers	9/2 ,,	,,	,,
,, foremen	6/8 ,,	,,	,,
,, labourers	4/5 ,,	,,	,,
,, cane-throwers	6d. per ton	,,	,,
,, cane-cutters	2/6 to 3/6 per ton.	,,	,,

Gardeners, Market.

European	£1 to £2 per week (with board)
Chinese	16/- to £1 ,,

Maritime Pursuits.

Boatswains	£8	per month, 48 h
Coal-trimmers & Deck-hands	£6 to £7	,, 48
Engineers, first	£20	per month, no specified.
,, second	£16	,,
Firemen	£8 to £9	,, 48 h
Lampers	1/3	per hour, no specified.
,, constant hands	50/-	per week of 60
Masters and engineers of harbour boats	60/-	,, 63
Sailmakers	10/-	per day, 54 hou
Sailors	£7	per month, 48 h
Sea cooks	£4 to £12	,, 48
Wharf labourers	1/- to 1/6	per hour, 48 ho
Youths on steamers	15/- to 22/-	per week of 48

Coaching.

'Busmen	36/- to 50/-	per week of 70
'Bus conductors	15/- to 20/-	,,
Dray and trollymen	40/- for one horse, 2/6 for every	70 hours.
Drivers (licensed)	20/- with board and lodging, 36/	70 hours.
Farriers	8/- to 9/-	per day, 48 hour
Grooms	36/-	per week of 72

Attendance and Service.

Males.

Barmen	20/- to 40/-	per week, with board no fixed time
Butlers	20/- to 30/-	,,
Coachmen	20/-	,,
Cooks	20/- to 60/-	,,
Dairymen	15/- to 20/-	,,
Gardeners	20/- to 30/-	,,
Gardeners' Labourers	15/- to 20/-	,,
Scullerymen	15/- to 20/-	,,
Waiters	20/- to 25/-	,,

Attendance and Service—continued.

Female.

Barmaids	20/- to 30/-	per week, with board and lodging, no fixed time specified.	
Cooks	25/-	,,	,,
General Servants	10/- to 18/-	,,	,,
Housemaids	12/- to 16/-	,,	,,
Laundresses	16/- to 20/-	,,	,,
Nursemaids	7/- to 10/-	,,	,,
Waitresses	14/- to 20/-	,,	,,

Agricultural and Pastoral Pursuits.

Agricultural Labourers	£30 to £50	per annum, no fixed time specified.	
Boundary Riders	£40 to £50	,,	,,
Bush Carpenters	£40 to £50	,,	,,
Cooks (Station)	£30 to £50	,,	,,
Farm Hands	£30 to £50	,,	,,
Fellmongers	7/6	per day, 55 hours per week.	
Fencers	£40 to £50	per annum, with board and lodging, no fixed time specified.	
Married Couples (wife cook).	£65 to £80	,,	,,
,, ,, (husband cook)	£75 to £100	,,	,,
Shearers	20/-	per 100 sheep, no fixed time specified.	
Stockmen	£40 to £60	per annum, with keep, no fixed time specified.	
Winegrowers	£70 to £100	,,	,,
Wool-scourers	7/6 per day, or in piecework 1¼d. to 1½d. per lb., no fixed time specified.		
Wool-pullers	42/- to 60/- per week	48 hours	
,, packers	42/- to 45/- per week	48 ,,	
,, sorters	20/- per 1,000 fleeces, or 50/- per week; no fixed time specified.		

Miscellaneous Trades.

			Hours.
Basket-makers—journeymen (piece).	£2 to £2 10/-	per week	48
,, apprentices	7/- to 15/-	,,	48
,, (blind)	15/- to 30/-	,,	48
Bellows-makers	£2 10/-	,,	54
Coach-builders—journeymen	7/- to 8/-	per day	48
,, body builders	8/- to /10-	,,	48
,, wheelmakers	8/- to 9/-	,,	48
,, painters	8/- to 10/-	,,	48

Miscellaneous Trades—continued.

Coachbuilders—trimmers	8/- to 10/- per day
,, apprentices	6/- to 30/- per week
Coopers (generally piece-work)	£2 15/- per week (average earnings)
Copper Smelters—overseers	12/- per day
,, mechanics	9/- to 11/- per day
,, labourers	7/- to 10/- ,,
,, smelters	7/- to 10/- ,,
,, refiners	7/6 ,,
,, calciner men	5/- to 7/6 ,,
Coke Works—overseers	£3 10/- per week
,, cokemen (piece)	10/- per day
,, machine men	9/- to 10/- per day
,, bagmen	6/- to 7/- ,,
,, labourers	6/- to 7/6 ,,
Electric Lighting—engineers	£4 to £5 per week
,, stokers	£2 to £2 10/- per week
,, lamp inspectors	£3 to £3 5/- ,,
,, day labourers	1/- per hour
,, wiremen	10/- per day
,, boys	15/- to 25/- per week

Miscellaneous Trades—continued.

		Hours.
Perambulator-makers	7/- to 9/- per day	8
Photographers	£4 per week	48
,, assistants	30/- to £2 per week	48
Potters	8/- to 10/- per day	8
Quarrymen	10/- per day	8
Soapmakers—stillmen	8/4 per day	8
,, soapmakers	£3 to £4 per week	48
,, candlemakers	6/8 to 10/- per day	8
,, labourers	6/8 to 7/6 ,,	9
,, boys	1/8 to 5/- ,,	8
Sweeps	30/- to 40/- per week.	
Tobacco operatives—twisters	£1 8/- to £2 10/- per week	54
,, driers	15/- to 18/- ,,	54
,, plug hands, &c.	£1 5/- to £2 ,,	54
,, cutters	18/- to 27/6 ,,	48
,, pickers and strippers	10/- to 18/- ,,	54
,, plug coverers (females)	15/- to £1 1/- ,,	48
,, cigarette-makers	15/- to 17/6 ,,	48
Venetian Blind makers	£1 15/- to £2 10/- ,,	48
Watchmakers	£2 15/- to £3 15/- ,,	48
Furniture, Bedding, &c.—		
Cabinet-makers (piece)	£2 10/- to £3 5/- ,,	48
,, (weekly wage)	£2 5/- to £3 ,,	48
,, (Chinese)	£1 to £1 15/- ,,	72
French-polishers (piece)	£2 10/- to £3 5/- ,,	48
,, ,, (wages)	£2 5/- to £3 ,,	48
Machinists	£2 10/- to £3 ,,	48
Carvers	£2 10/- to £3 ,,	48
Turners	£2 to £2 15/- ,,	48
Chair-makers	£2 10/- to £3 ,,	48
Engineers	£2 to £3 10/- ,,	48
Wire mattress-frame-makers	£1 10/- to £1 15/- ,,	48
,, makers	£1 5/- ,,	48
Bedding hands	£1 5/- to £1 15/- ,,	48
Upholsterers (piece) (male)	£2 10/- to £3 ,,	48
,, (wages) (male)	27/6 to £2 15/- ,,	48
Upholstresses (wages) (female)	12/- to 33/- ,,	48
Carpet-sewers (females)	12/- to 20/- ,,	48

Miscellaneous Trades—continued.

Furniture, Bedding, &c.—	
Mattress-makers (females)	15/- to 25/- per week
Chinese cabinet-makers	30/- per week (with bo and lodging)
Sand-paper men, polishers (Chinese)	20/- to 25/- per week (wi board and lodging)
Brickmakers—	
Moulders (piece)	8/- to 11/- per day
Pressers, setters, burners, and drawers	7/6 to 9/4 ,,
Carters	£2 to £2 10/- per week
Day labourers	7/- to 7/6 per day
Boys	15/- to 25/- per week
Engine-drivers	£2 to £2 10/- ,,

Municipal Employés (City).

Carters	11/6 per day (finding hor
Gangers	8/- to 11/- ,,
Labourers	7/- to 8/- ,,
Overseers	8/- to 9/- ,,
Regulators of street traffic	8/- to 9/- ,,
Masons	8/- to 10/- ,,
Pipe-layers	8/- ,,
Street cleaners	4/2 to 8/- ,,
Stone-breakers (piece)	2/6 to 3/- per cubic yard
Timekeepers	£1 10/- to £2 per week

State Railway Employés.

Blacksmiths	9/- to 11/- per day of 8
,, strikers	7/5 to 7/6 ,, 8
Boilermakers	9/- to 10/4 ,, 8
Boilermakers' assistants	7/4 ,, 8
Brakesmen	42/- per week 55
Brassfinishers	9/- to 10/2 per day of 8
Bricklayers	11/- ,, 8
Carpenters	8/8 to 10/- ,, 8
Carriage and waggon builders	10/- to 10/2 ,, 8
,, trimmers	10/- to 10/2 ,, 8
Conductors	7/8 per day, 60 hours pe
Cleaners, engine	5/- to 6/2 per day, 48 hrs
Coppersmiths	10/3 per day, 48 hours pe
Drillers	7/11 ,, 48 ,,
Dressers	8/2 ,, 48 ,,
Engine-drivers (locomotive)	11/- to 13/11 per day, 54 hrs
,, (stationary)	7/- to 9/- ,, 48

State Railway Employés—continued.

Examiners (carriage and waggon)	9/6	per day, 48 hours per week.
Fettlers	7/6	,,
Firemen	8/- to 9/6	per day, 54 hrs. per week.
Fitters	9/- to 10/10	,, 48 ,,
Foremen	£240 to £450	per annum, 48 hours per week.
Gangers	9/-	per day of 8 hours.
Gasfitters	9/10	,, 8 ,,
Guards	9/- to 10/-	,, 55 hrs. per week.
Labourers	7/- to 7/3	,, of 8 hours.
Lifters (carriage and waggon)	9/3	,, 8 ,,
Machinists	7/6 to 8/9	,, 8 ,,
Moulders	8/6 to 10/3	,, 8 ,,
Painters	8/- to 9/2	,, 8 ,,
Patternmakers	9/- to 11/7	,, 8 ,,
Plumbers	9/9	,, 8 ,,
Porters	7/- to 7/2	,, 48 hrs. per week.
Pumpers	8/6, no fixed time.	
Shunters	8/- to 11/-	per day, 55 hrs. per week.
Signalmen	7/- to 9/3	,, 48 ,,
Spring-makers	10/9	,, 48 ,,
Station-masters	£150 to £400	per annum, no fixed time specified.
Tinsmith	10/2	per day, 48 hrs. per week.
Turners	10/8	,, 48 ,,
Waggon builders	10/2	,, 48 ,,
Watchmen	£2 2/- to £2 5/-	per week of 55 hours.

Mining.

Coal—(Northern mines)—

				Hours per week.
,,	Miners, piece-work, average	3/10	per ton	48
,,	Overmen (underground)	10/- to 14/-	per day	48
,,	Deputy overmen	9/- to 11/-	,,	48
,,	Shiftmen	7/- to 10/-	,,	48
,,	Onsetters	6/6 to 10/-	,,	48
,,	Bankers off	7/6 to 8/6	,,	48
,,	Screenmen	6/6 to 7/-	,,	48
,,	Engine-drivers	9/- to 15/-	,,	48
,,	Enginemen and firemen	7/- to 8/-	,,	48
,,	Screen overmen	9/6 to 10/-	,,	48
,,	Overmen (overground)	11/6 to 13/-	,,	48

Mining—continued.

Coal—(Northern mines)—			
,, Plate-layers		8/6 to 10/-	,,
,, Furnace-men		6/6 to 7/6	,,
,, Harnessmaker		7/6 to 8/-	,,
,, Packers		2/6 to 4/-	,,
,, Wheelers		4/- to 7/6	,,
,, Water-bailers		3/- to 7/6	,,
,, Horse-drivers		3/4 to 7/6	,,
,, Stablemen		7/- to 7/6	,,
,, Labourers		6/- to 7/6	,,
,, Flatters		4/- to 8/6	,,
,, Trappers		2/- to 3/-	,,
,, Boys		2/6 to 3/-	,,
(Southern and Western mines)—			
,, Miners (2/4 per ton)		8/- to 9/-	,,
Gold		£2 10/-	per week
Silver-mining, Broken Hill—			
Mechanics and Surface Hands.			
Engineers		12/-	per shift of
Carpenters		10/-	,,
Blacksmiths		11/- to 12/-	,,
,, strikers		8/4 to 9/-	,,
Engine-drivers (hoisting)		11/-	,,
Firemen		9/-	,,
,, assistants		8/-	,,
Fitters		10/- to 12/-	,,
Machine men (shop)		10/-	,,
Boilermakers		12/-	,,
Riveters		10/-	,,
Tinsmiths		10/-	,,
Saw-millers		8/4 to 10/-	,,
Horse-drivers		8/4	,,
Labourers (all)		8/4	,,
Boys		3/- to 7/6	,,
Tappers		10/-	,,
Slag-wheelers		9/-	,,
Feeders		10/-	,,
Charge-wheelers		9/-	,,
* Underground Hands.			
Miners	6 hours on Sunday to constitute a shift work	10/-	,,
,, (in wet shafts)		10/10	,,

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* Since 6th November, 1892, underground work has been let by the

Mining—continued.

Silver-mining, Broken Hill—*continued.*

Brace and plat men	9/–	per shift of 8 hours.	
Truckers	8/4	,,	,,
Ore-dressing Hands.			
Washers	10/–	,,	,,
Head-runners	9/-	,,	,,
,, feeders	9/–	,,	,,
Engine-drivers	10/–	,,	,,

Overtime.—All time worked over eight (8) hours per day to be paid for at the rate of time and a quarter (Sundays not excepted).

		Hours.
Tin	£2 10/- per week	44

Comparatively high rate of wages.

An inspection of the preceding table at once reveals the fact that the labouring classes in this community are far in advance of their fellow-workmen in older countries, in other respects, besides the mere question of better wages. In nearly all departments of labour the daily toil is restricted to eight hours, and though there is no statutory recognition of this time as the limit of a man's labour, it is tacitly acknowledged even by the Governments of the various colonies. Labour organizations and trades' unions are particularly strong in the two provinces of New South Wales and Victoria. Every year a day is set apart in these colonies by the Trades and Labour Councils for the public celebration of the foundation of the eight-hour system; and the State countenances the demonstration by making the day a public holiday.

Eight-hour system generall adopted.

OCCUPATIONS OF THE PEOPLE.

Occupations of the people.

The occupations of the people were ascertained at the census of of 1891, and have been classified on a uniform system approved of and adopted at the Census Conference held at Hobart prior to the taking of the census. The method of classification adopted by all the colonies at the previous census was based on the English classification of 1881, which was both unsatisfactory and unscientific. Under the present system the population is divided into two great divisions—workers and dependents. The workers are arranged in the natural classes of primary producers and distributors, and these again into their various orders and suborders.

Dividing the population into the seven classes, and exclu 2,522 males and 531 females unspecified, the number fal under each was as follows :—

Class.	Occupation.	Persons.	Males.
I	Professional—Embracing all persons, not otherwise classed, mainly engaged in the Government and defence of the country, and in satisfying the intellectual, moral, and social wants of its inhabitants	30,879	20,485
II	Domestic—Embracing all persons engaged in the supply of board and lodging, and in rendering personal services for which remuneration is usually paid	58,393	17,563
III	Commercial—Embracing all persons directly connected with the hire, sale, transfer, distribution, storage, and security of property and materials, and with the transport of persons or goods, or engaged in effecting communication	87,967	82,230
IV	Industrial—Embracing all persons not otherwise classed, who are principally engaged in various works of utility, or in specialities connected with the manufacture, construction, modification, or alteration of materials so as to render them more available for the various uses of man, but excluding, as far as possible, all who are mainly or solely in the service of commercial interchange	140,941	123,153
V	Agricultural, pastoral, mineral, and other primary producers—Embracing all persons mainly engaged in the cultivation or acquisition of food products, and in obtaining other raw materials from natural sources	136,375	134,255
VI	Indefinite—Embracing all persons who derive incomes from services rendered, but the direction of which services cannot be exactly determined	10,382	4,750
VII	Dependents—Embracing all persons dependent upon relatives or natural guardians, including wives, children, and relatives not otherwise engaged in pursuits for which remuneration is paid, and all persons depending upon private charity, or whose support is a burthen on the public revenue........................	655,964	223,045

The orders number twenty-four, and show the following totals in each :—

Class.	Order.	Occupation.	Persons.	Males.	Females.
I	1	Persons engaged in Government, defence, law, and protection, not otherwise classed	6,877	6,788	89
...	2	Persons ministering to religion, charity, health, education, art, and science	24,002	13,697	10,305
II	3	Persons engaged in the supply of board and lodgings, and in rendering personal service for which remuneration is usually paid	58,393	17,563	40,830
III	4	Persons who perform offices in connection with the exchange, valuation, insurance, lease, loan or custody of money, houses, land or property rights	7,950	7,299	651
...	5	Persons dealing in art and mechanic productions, in which matters of various kinds are employed in combination	3,263	3,022	241
...	6	Persons engaged in the sale, hire, or exchange of textile fabrics and dress, and of fibrous materials ..	5,929	5,048	881
...	7	Persons engaged in dealing in food, drinks, narcotics, and stimulants	14,514	13,053	1,461
...	8	Persons engaged in dealing in and treating animals, and dealing in animal and vegetable substances, excluding dealers in food	3,016	2,958	58
...	9	Persons engaged in dealing in minerals, mainly used for fuel and light	1,369	1,361	8
...	10	Persons engaged in minerals, other than for fuel	1,517	1,490	27
...	11	Persons engaged as general dealers, speculators on chance events or in undefined mercantile pursuits.	18,957	17,048	1,909
...	12	Persons engaged in storage	79	78	1
...	13	Persons engaged in the transport of passengers, goods, or communication	31,373	30,873	500

Class.	Order.	Occupation.	Persons.	Males.
IV	14	Persons engaged in connection with the manufacture or in other process relating to art and mechanic productions in which materials of various kinds are employed in combination	19,069	18,478
...	15	Persons engaged in connection with the manufacture, or in repairs, cleansing, or in other processes relating to textile fabrics, dress, and fibrous materials	24,515	7,637
...	16	Persons engaged in connection with the manufacture, or in other processes relating to food, drink, narcotics, and stimulants	6,900	6,653
...	17	Persons not otherwise classed, engaged in connection with manufacture or other processes connected with animal and vegetable substances	6,912	6,881
...	18	Persons engaged in the alteration, modification, or manufacture or in other processes relating to metal or mineral matters	13,061	13,053
...	19	Persons engaged in the construction or repair of buildings, roads, railways, docks, earthworks, &c., in the disposal of silt, dead matter, or refuse, or in operations the nature of which is undefined.	38,027	38,024
...	20	Industrial workers imperfectly defined	32,457	32,427
V	21	Persons directly engaged in the cultivation of land, or in rearing or breeding animals, or in obtaining raw products from natural sources	136,375	134,255
VI	22	Persons whose occupations are undefined or unknown, embracing those who derive incomes from sources which cannot be directly related to any other class	10,382	4,750
VII	23	Persons dependent upon natural guardians	643,486	214,525
...	24	Persons dependent upon the State or upon public or private support	12,478	8,520
		Unspecified	3,053	2,522

A further division into sub-orders shows very interesting results, as may be seen below :—

Class.	Order.	Sub-Order.	Occupation.	Persons.	Males.	Females.
			Ministering to—			
I	1	1	General government	672	666	6
		2	Local do	285	278	7
		3	Defence	1,268	1,268	......
		4	Law and order	4,652	4,576	76
	2	1	Religion	1,530	1,367	163
		2	Charity	344	63	281
		3	Health	5,148	2,557	2,591
		4	Literature	730	694	36
		5	Science	226	221	5
		6	Engineering, surveying, and architecture	2,789	2,789	......
		7	Education	8,761	3,044	5,717
		8	Fine arts	1,007	773	234
		9	Music	1,717	629	1,088
		10	Amusements	1,750	1,560	190
			Engaged in—			
II	3	1	Boarding, lodging, and entertaining	17,164	7,434	9,730
		2	Attendance	41,229	10,129	31,100
III	4	1	Property and finance	3,219	3,173	46
		2	Insurance and valuation	1,646	1,632	14
			Dealing in—			
		3	Real property	3,038	2,447	591
		4	Property rights not otherwise classed	47	47	......
	5	1	Books, publications, and advertising	950	879	71
		2	Musical instruments	74	68	6
		3	Prints, pictures, and art materials	26	24	2
		4	Ornaments and minor art products	304	225	79
		5	Equipment for sports and games	......	......	......
		6	Types, designs, medals, and dies	2	2	......
			Persons dealing in—			
		7	Watches, clocks, and scientific instruments	100	93	7
		8	Surgical implements and appliances	2	2	......
		9	Arms and explosives	3	3	......
		10	Machinery, implements, and tools	196	187	9
		11	Carriages and vehicles	11	11	......
		12	Harness, saddlery, and leatherware	37	37	......
		13	Ships, boats, and their equipments	62	62	......

Class.	Order.	Sub-Order.	Occupation.	Persons.	Males.
			Persons dealing in—		
III	5	14	House fittings, building materials	702	701
		15	Furniture	325	302
		16	Chemicals and by-products	75	75
		17	Paper, paper-makers' materials	394	351
	6	1	Textile fabrics	5,096	4,355
		2	Dress	818	678
		3	Fibrous materials	15	15
	7	1	Animal food	6,431	6,321
		2	Vegetable food	2,648	2,181
		3	Groceries, drinks, narcotics, and stimulants	5,435	4,551
	8	1	Animals	1,244	1,242
		2	Manures and animal waste products	1	1
		3	Leather, raw materials, and manufactures	63	62
		4	Other animal matters	634	634
		5	Seeds, plants, flowers, and vegetable products	1,050	995
		6	Other vegetable matters	24	24
	9	1	Coal and other substances used for fuel and light	1,369	1,361
	10	1	Stone, clay, earthenware, and glass	157	140
		2	Gold, silver, and precious stones	5	5
		3	Metals, other than gold and silver	1,355	1,345
	11	1	Merchants and undefined dealers	11,692	10,371
		2	Speculators on chance events	238	234
		3	Other mercantile persons (undefined)	7,027	6,443
	12	1	Storage	79	78
	13	1	Connected with railway and tramway traffic	8,824	8,681
			Connected with :—		
		2	Road traffic	7,180	7,156
		3	Sea and river traffic	10,489	10,432
		4	Postal service	2,117	1,864
		5	Telegraph and Telephone Service	1,695	1,673
		6	Delivery of documents, parcels, and messages	1,068	1,067
IV	14	...	Working in :—		
		1	Books and publications	4,318	4,023
		2	Musical instruments	145	145
		3	Prints, pictures, and art materials	288	275

Class.	Order.	Sub-order.	Occupation.	Persons.	Males.	Females.
IV	14		Working in :—			
		4	Ornaments and minor art products	439	337	102
		5	Equipments for sports and games	13	13	......
		6	Designs, medals, types and dies	151	150	1
		7	Watches, clocks, and scientific instruments...........	715	712	3
		8	Surgical instruments and appliances	17	16	1
		9	Arms, ammunition, and explosives	80	80	......
		10	Engines, machines, tools, and implements	3,628	3,628	......
		11	Carriages and vehicles	2,897	2,896	1
		12	Harness, saddlery, and leatherware	2,861	2,850	11
		13	Ships, boats, and their equipments	1,283	1,283	......
		14	Furniture.........................	2,091	1,971	120
		15	Chemicals and by-products	143	99	44
	15	1	Textile fabrics	211	143	68
		2	Dress	24,084	7,289	16,795
		3	Fibrous materials	220	205	15
	16	1	Animal food	463	458	5
		2	Vegetable food	4,386	4,222	164
		3	Groceries, drinks, narcotics, and stimulants, &c.	2,051	1,973	78
	17	1	Animal matters (not otherwise classed)	821	818	3
		2	Working in wood (not otherwise classed)	5,993	5,988	5
		3	Working in vegetable produce for fodder	37	37	......
		4	Paper manufacturers.........	61	38	23
			Persons working in :—			
	18	1	Fuel, light, and electric energy	1,057	1,057	......
		2	Stone, clay, earthenware, glass, &c.................. .	3,037	3,033	4
		3	Gold, silver, and precious stones	486	485	1
		4	Other metals	8,481	8,478	3
	19		Persons engaged in constructing, &c., of :—			
		1	Houses and buildings	24,857	24,856	1
		2	Roads, railways, bridges, earthworks, &c............	12,457	12,457	......
		3	Disposition of dead matter or refuse	713	711	2
	20	1	Imperfectly defined industries	32,457	32,427	30

Class.	Order.	Sub-order.	Occupation.	Persons.	Males.
V	21		Engaged in :—		
		1	Agricultural pursuits	68,546	67,524
		2	Pastoral pursuits	32,144	31,052
		3	Preserving, capturing, or destroying wild animals ...	1,666	1,664
		4	Forestry, or acquisition of natural vegetable products	1,653	1,651
		5	Water conservancy and supply	1,762	1,761
		6	Mines, quarries, or acquisition of natural mineral products	30,604	30,603
VI	22		Persons of :—		
		1	Independent means	10,223	4,606
		2	Imperfectly defined pursuits	159	144
VII	23	1	Persons employed in household duties	217,817	105
		2	Students (not law, medicine, art, or music) and scholars	235,662	118,526
		3	Relatives and others not performing household duties	190,007	95,894
	24	1	Persons dependent on charity	9,567	5,986
		2	Persons under legal detention	2,911	2,534
...	...	...	Not stated or ill-defined ...	3,053	2,522

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